T. E. MURRAY.

ELECTRIC SIGN.

APPLICATION FILED OCT. 24, 1908.

935,803. Patented Oct. 5, 1909.

Fig:1

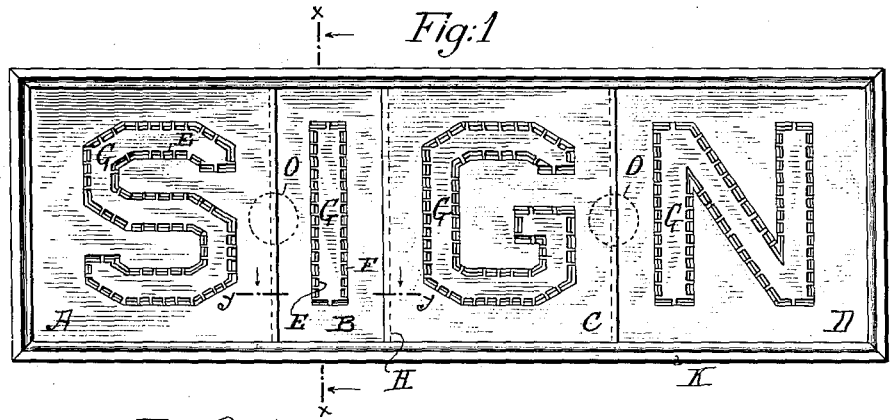


Fig:2

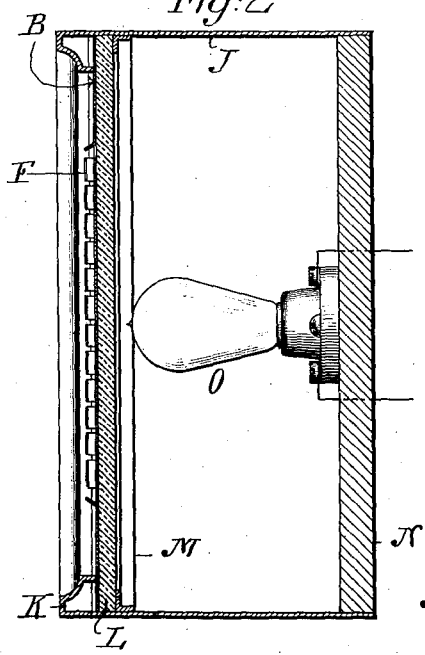


Fig:3

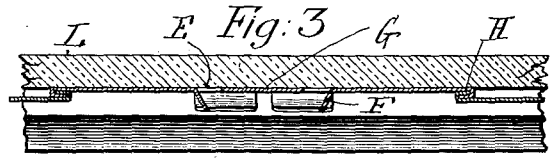


Fig:4

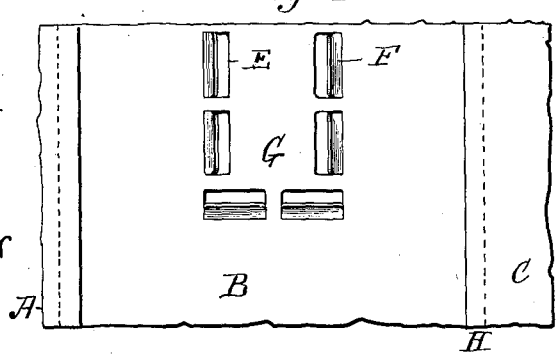


Fig:5

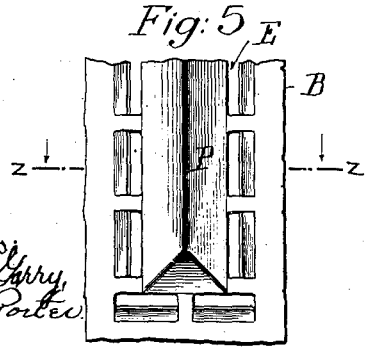
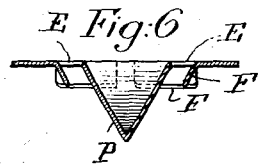


Fig:6



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UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF NEW YORK, N. Y.

ELECTRIC SIGN.

935,803. Specification of Letters Patent. Patented Oct. 5, 1909.

Application filed October 24, 1908. Serial No. 459,344.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Electric Signs, of which the following is a specification.

The invention relates to electric signs and consists in a plate having on its surface a plurality of reflectors following the outline of a letter or character, and inclined to reflect light upon the portion of said surface included within said outline: also in the construction of said plate with openings following said outline, through which openings the light rays pass to said reflectors: also in the construction whereby said reflectors are formed upon the outer edges of said openings by striking up the metal of the plate: and also in the various combinations set forth in the claims.

In the accompanying drawings—Figure 1 is a front elevation of my electric sign. Fig. 2 is a cross section on the line x, x, of Fig. 1. Fig. 3 is a longitudinal section on the line y, y, of Fig. 1. Fig. 4 is an enlarged plan view of the lower part of the letter I in Fig. 1. Fig. 5 is a plan view of a portion of the letter I of Fig. 1, showing the body part of the letter raised above the general surface of the plate. Fig. 6 is a section on the line z, z, of Fig. 5.

Similar letters of reference indicate like parts.

The sign may comprise a single plate A, preferably of sheet metal, bearing a character, letter or word, or a plurality of such plates as A, B, C, D, each bearing a letter or character, and arranged to form a word or composite design. In each plate is formed a plurality of openings E following the outline of the letter or character. Said openings may be quadrangular in form, and produced by cutting the metal on three sides, leaving it attached on its fourth side or outer edge. The attached piece F is then bent outwardly and in inclined position, so that its inner inclined surface forms a reflector, whereby light, coming from the rear side of the plate through the opening E, is reflected upon the portion G of the plate surface which is included within the outline of the letter or character. In this way the said letter or character becomes defined not only by the light seen directly through the openings E, but also by the reflected light cast upon the body portion of the outlined letter. This body portion may be painted white or polished so as again to reflect the rays to the eye of the observer, the remainder of the plate outside the reflectors F being preferably blackened. The inner surfaces of the reflectors F may also be whitened or polished so as to increase their reflecting capacity.

While it is preferable and cheaper to produce the reflectors F by striking up the material of the plate as described, it is obvious that they can be made separately and secured in suitable proximity to the openings in any desired way.

Where several plates are used to make up the sign, they may be connected by bending over and interlocking the meeting edges, as shown at H, Fig. 3. The plate is, or the plates are then inserted in a box J having on its front edge a frame K, against which said plates bear. In rear of the plates may be inserted a plate L of glass or other transparent medium, which is held in place by the inserted flanged frame M. Within the box and held in any desired way, as by attachment to the backboard N, I place a suitable number of glow lamps O, (dotted lines, Fig. 1) the light rays from which pass through the openings E and are reflected as before described, upon the body portions of the letters or characters. The letters or characters may be made to appear of any desired color by using plates L of colored glass, or by making the bulbs of the glow lamps O of colored glass. The glass plates L serve the further function of preventing rain or moisture from entering the box J through the openings E.

Instead of leaving the portion of the plate surface, which is outlined by the openings E, flat, I may make it in relief and of any desired cross sectional shape. Thus in Figs. 5 and 6, I show the electric body in pyramidal form having sides P inclined preferably at the same angle as the reflectors F.

I claim:

1. A plate having a plurality of openings following the outline of a letter or character, and a plurality of inclined reflectors disposed on one side of said plate, and constructed to receive light rays coming through said openings and reflect the same upon the portion of the plate surface included within said outline.

2. In an electric sign, a plate having a plurality of openings following the outline of a letter or character, a source of illumination on one side of said plate, and a plurality of reflectors on said plate and inclined to reflect the light rays coming through said openings upon the portion of the plate surface included within said outline.

3. An electric sign having illuminating lamps contained therein and one side or face thereof provided with a slot forming approximately the outline of a letter, and a reflecting flange extending upwardly from the outer edge of the slot, said flange being inclined whereby to reflect the light onto the metal forming the letter contained within the slotted outline, substantially as described.

4. An electric sign having illuminating lamps contained therein and one side or face thereof provided with a slot forming approximately the outline of a letter, the metal of said letter being held in place by cross pieces formed integral with said plate and letter, and a reflecting flange extending upwardly at an incline from the outer edge of the slot, whereby to reflect the light onto the metal forming the letter and contained within the slotted outline, substantially as described.

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

THOMAS E. MURRAY.

Witnesses:

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