

C. A. McNEAL.

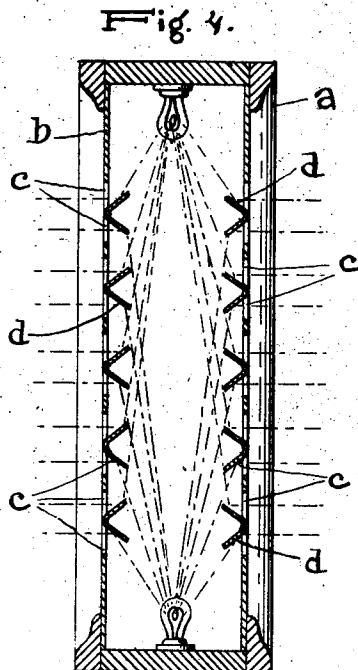
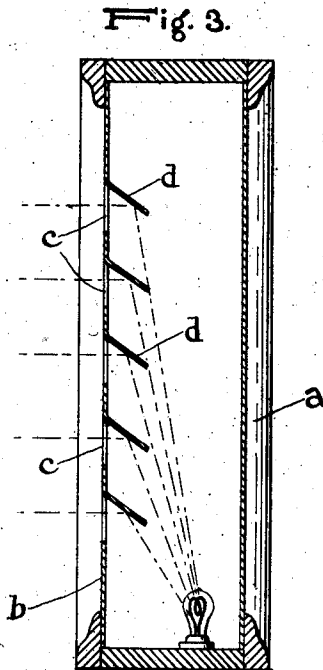
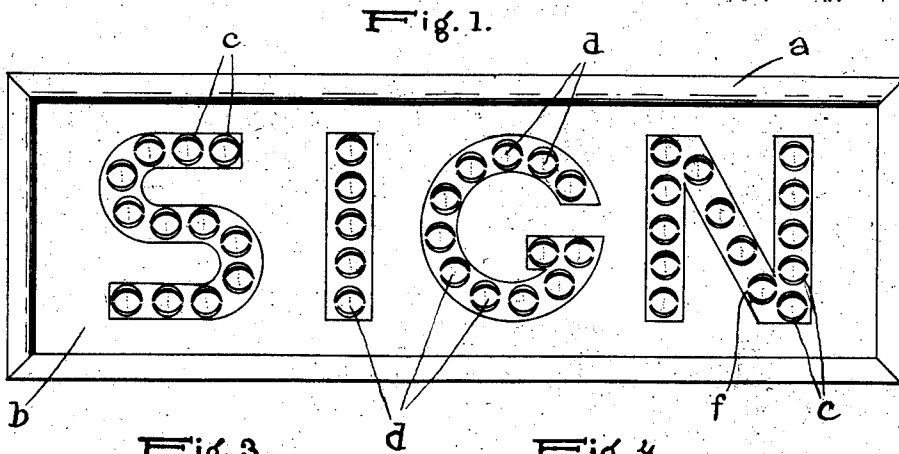
SIGN.

APPLICATION FILED MAY 6, 1908.

905,565.

Patented Dec. 1, 1908.

2 SHEETS—SHEET 1.



Witnesses

Stuart Hilder.
George M. Anderson.

Inventor
Chas. A. McNeal

By

E. W. Anderson

His Attorney

C. A. McNEAL.
SIGN.

APPLICATION FILED MAY 6, 1908.

905,565.

Patented Dec. 1, 1908.

2 SHEETS—SHEET 2.

Fig. 5.

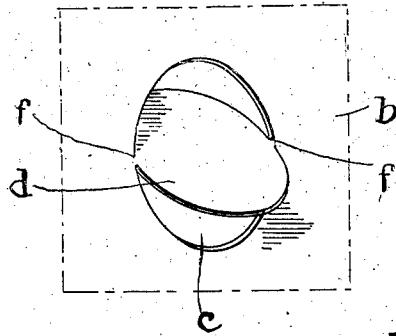


Fig. 6.

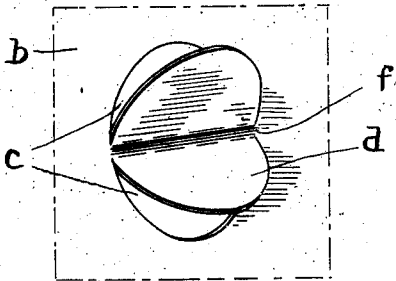


Fig. 7.

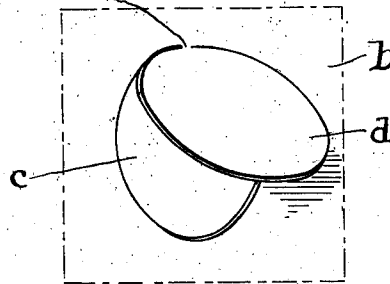
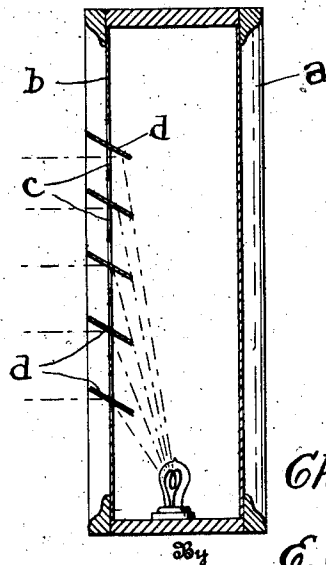


Fig. 2.



Witnesses

Stuart Hilder.
George M. Curran.

Inventor

Chas. A. McNeal

E. W. Anderson
his Attorney

UNITED STATES PATENT OFFICE.

CHARLES A. McNEAL, OF NEWARK, OHIO.

SIGN.

No. 905,565.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed May 6, 1908. Serial No. 431,132.

To all whom it may concern:

Be it known that I, CHARLES A. McNEAL, a citizen of the United States, resident of Newark, in the county of Licking and State of Ohio, have made a certain new and useful
5 Invention in Signs; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to
10 make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a front view of the invention as
15 applied. Fig. 2 is a transverse vertical section of the sign case shown in Fig. 1, taken through a vertical line of perforations. Fig. 3 is a similar view of a modified form of the invention. Fig. 4 is a similar view of a
20 second modification of the invention. Fig. 5 is a detail perspective view of the reflector shown in Figs. 1 and 2. Fig. 6 is a similar view of the reflector shown in Fig. 4. Fig. 7
25 is a similar view of the reflector shown in Fig. 3.

The invention has relation to illuminated signs, and it consists in the novel construction and combinations of parts as hereinafter set forth.

30 In the accompanying drawings, illustrating the invention, the letter *a*, designates a sign box or case, having a metal face *b*, which is provided with circular perforations *c*, outlining the letters or other characters of the
35 sign. In each perforation is placed a circular or disk reflector *d*, which extends at an angle to the face of the sign and is adapted to reflect outward through such perforation to the eye of the observer the rays of light from
40 an electric bulb or other source of light, placed at one side of such reflector and perforation and within the sign box.

As shown in the drawings, the reflector *d*,
45 is formed of the metal of the face plate of the sign when the perforation is struck therefrom, a connecting strip or neck of metal *f*, being left between the reflector and face plate body, whereby the reflector is held in
50 position, although the reflector may be secured in position adjacent to the perforation by soldering or in any other suitable manner.

In Figs. 3 and 7 of the drawings the reflector is shown as connected to the face
55 plate of the sign by one strip or neck of metal only, the entire reflector being bent inward

from such neck or strip and lying within the sign box.

In Figs. 4 and 6 the reflector is shown as connected to the face plate by diametrically opposite strips *f*, opposite semi-circular
60 halves of the reflector being both bent inward and toward each other and having a similar angle of inclination with relation to the top and bottom of the sign case or box. In this form of my invention lights are placed
65 at both top and bottom of the sign box, and a double reflection is obtained of both lights from each reflector.

In Figs. 2 and 5 the reflector is shown as connected to the face plate of the sign by
70 diametrically opposite strips *f*, as in the case just described, but the whole reflector is given the same inclination, one half thereof lying within the sign box and the other half thereof lying without the same.
75

In the use of the invention the reflector disks are covered with aluminum leaf or otherwise converted into mirrors, the general effect being very similar to that of a sign composed of electric bulbs, the first cost and
80 operating expense being however much less.

The lights within the sign box, which are usually arranged in rows, may be placed either above or below or at the sides of a horizontal or perpendicular line of lettering, or in the
85 center of a circular line of lettering or other characters. The reflector disks in all cases, however, must be arranged at such angles as to reflect the rays or image of the light outward through the circular perforations of
90 the sign.

The same number of lights will illuminate either a single or a double faced sign.

Having described the invention, what I claim and desire to secure by Letters Patent
95 is:

1. An illuminated sign having a face plate provided with lines of perforations, each perforation being provided with a separate reflector lying across and partially closing the
100 perforation and having an inward inclination with respect to said face plate.

2. An illuminated sign having a face plate provided with lines of perforations, each perforation being provided with a separate flat
105 reflector lying at least partly within said case across and partially closing the perforation and having an inward inclination with respect to said face plate.

3. An illuminated sign composed of a sign
110

box or case having a metal face plate provided with lines of perforations, each perforation being provided with a separate reflector having an inward inclination with respect to said face plate, said reflector being formed of the metal struck from the face plate to form the perforation and having an integral neck connection with said face plate.

4. An illuminated sign composed of a sign box or case having a metal face plate provided with lines of circular perforations, each perforation being provided with a separate disk reflector having an inward inclination with respect to said face plate, said reflector being formed of the metal struck from the face plate to form the perforation, and hav-

ing an integral neck connection with the face plate.

5. An illuminated sign composed of a sign box or case having a metal face plate provided with lines of perforations, each perforation being provided with a separate reflector having an inward inclination with respect to said face plate, said reflector having opposite halves thereof bent toward each other within the sign box.

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

CHARLES A. McNEAL.

Witnesses:

CHARLES C. FORRY,
B. SABINA SOUDER.