

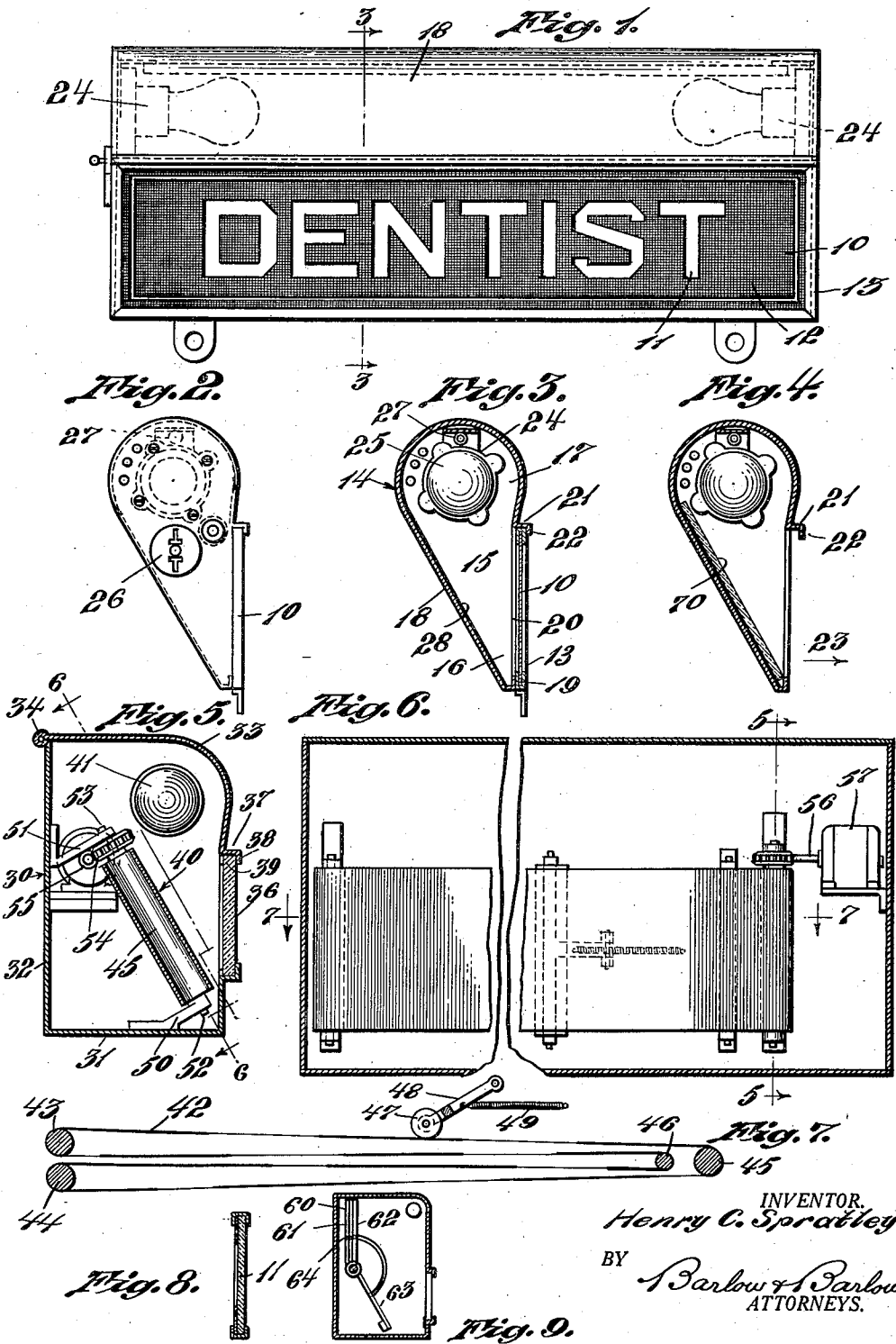
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H. C. SPRATLEY

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SIGN REFLECTOR

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INVENTOR
Henry C. Spratley
BY Barlow & Barlow
ATTORNEYS.

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SIGN REFLECTOR

Henry C. Spratley, Providence, R. I.

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3 Claims. (Cl. 40—132)

This invention relates to a reflector for a sign of a transparent or translucent character through which light may be passed from the back of the sign.

5 An object of the invention is the provision of a detachable reflector or light source which may be mounted upon a sign and detached therefrom at will so that the sign may be used without a reflector or light source in the daytime and this
10 reflector or light source attached for illuminating the same at night.

Another object of the invention is the provision of a reflector which is arranged at such an angle with reference to the sign as to intensify the light
15 and brilliancy of the sign.

Another object of the invention is the provision of a reflector for a sign which will not only intensify the light but will also sufficiently equalize
20 any irregularities in the light to prevent so called spots of light.

Another object of the invention is the provision of a construction by which the sign may be
25 changed in color by the provision of reflectors of different colors.

A further object is the provision of a construction by which the colors may be progressively
30 changed from one end of the sign to the other that the appearance of an animated sign may be had.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:

35 Fig. 1 is an elevational view of a sign with a reflector attached thereto.

Fig. 2 is an end view of the structure shown in Fig. 1.

40 Fig. 3 is a sectional view of the reflector on the line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 3 with the sign omitted, and with an opal glass reflector inserted.

Fig. 5 is a sectional view through a modified form of reflector with the sign in position.

45 Fig. 6 is a sectional view on line 6—6 of Fig. 5.

Fig. 7 is a diagrammatic view illustrating a traveling reflector as though sectioned on line 7—7 of Fig. 6.

50 Fig. 8 is a sectional view through the sign of the type which would be used with a reflector such as shown in Figs. 5 and 6.

55 Fig. 9 is a sectional view through a modified form having a movable reflector which may be used in a suitable casing having a source of light therein.

In the use of signs which are illuminated from the back, it is desirable to have some sort of a source of light which may be mounted upon the sign and which may be readily detached when desired, also it is desirable that this source of light
5 may be shielded from direct view, it being merely observed through the sign. It is also desirable that changeable colored signs may be had and in order that this may be accomplished in a simple and inexpensive manner this invention provides a hollow housing of a shape to receive a
10 suitable light source such as an incandescent bulb and is so shaped and weighted that the reflector when hung upon the sign, will maintain its desired position thereon, while in instances where
15 changeable color effects are desired, a reflector having a traveling reflecting surface is used which may be of different colors so that it may be moved from one position to another, to vary the coloring effects of the sign, and the following is a more
20 detailed description of the present embodiment of this invention illustrating the preferred means by which these advantageous results may be accomplished.

25 With reference to the drawing, there is illustrated at 10 a sign such as is more fully described in the copending application of Henry C. and Arthur L. Spratley, Serial No. 699,015 filed of even date herewith. This sign has transparent or translucent portions which for convenience may be considered as the portions within the outline of the letters 11, while the remaining background or surrounding portion 12 will be of an opaque character. The reverse of course may be true if desired. The sign has a suitable
30 frame or border 13 which may be of metal or some non-frangible material.

The reflector consists of a hollow body designated generally 14. The ends 15 are of sheet metal cut out somewhat pear-shaped being narrow as at one edge 16 and widened out and terminating on the arc of a circle at 17 at the other edge. A strip of material 18 extends along the edge of the ends 15 and may be of any width desired, but is preferably of a length substantially the same as the length of the sign which it is adapted to fit. This material 18 is secured about the edge of both the ends with a short
45 upturned portion 19 along the lower edge of the opening 20, on one side of the body, while the 50 strip of sheet material 18 at the opposite edge of the opening 20 is bent outwardly as at 21 to form a flange which will rest upon the top of the relatively narrow edge of the sign 10. A lip 22 extends downwardly from the flange 21 to extend
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over the front surface of the top edge and together with the flange 21 forms a hook to engage this top edge of the sign 10.

The shape of the sign with its larger end upward is such that when this flange and lip are hung over the top edge of the sign the weight of the reflector being back of this point of support tends to swing the reflector about this top edge as a pivotal point in the direction of the arrow 23, so as to cause the lower edge of the opening 20 to abut against the sign 10, as illustrated in Figs. 2 and 3 and maintain a close fit therewith; thus this hollow body may be easily and quickly positioned on the edge of the sign 10 or removed therefrom and by reason of the hook edge will be supported in the desired position.

Within this hollow body, there are mounted incandescent bulb sockets 24 supported on either end wall 15 which in turn supports the incandescent lamps 25 within the hollow body. Suitable electric wire connections extend between the two sockets connecting them in parallel and to a socket portion of a plug 26 which may in turn be connected to the house illuminating current as a source of energy. The wires connecting the two sockets may be housed in a tube 27, if desired for a proper protection against fire hazards or the like, which tube may also serve to strengthen the device in forming the same more rigidly at the ends.

The inner surface of this light housing unit, designated 28, will be provided with a coating of light reflecting material such as white enamel paint and this surface will be located at such an angle with reference to the sign 10 as to most advantageously reflect the light from above through the sign.

In some cases, it is desirable to provide a hollow body of some different shape and there is illustrated in Figs. 5 and 6 a body designated generally 30 which is generally rectangular in cross section with a bottom wall 31, back wall 32 formed of one piece of material while there is a swingable top and portion of the front wall 33 formed from another piece of material hinged thereto as at 34. Another portion of the front wall is designated 35 and extends along the opening 36 formed in the front wall and with the opposite edges of the stock about the opening provided with flanges 37 and lips 38 extending at right angles thereto for the reception of a sign which may be slid therein and which will be of a length to extend beyond the ends of the opening in the front of the body or fingers 39 will be bent down to prevent the sign from moving into the body.

The sign which is used in this particular construction will be of a character to have translucent or transparent portions 41 and any coloring or reflection which is to be had through these transparent portions will be from the reflector designated generally 40 which is in a plane at an angle to the plane of the sign so as to advantageously reflect the light at 41 from above through this sign by reason of which it is intensified to a far greater extent than were the light to shine through the reflector and the sign.

This reflector 40 may be of a fixed sheet of material or it may be a traveling web of material which will have some shiny reflective surface such for instance as celluloid or a like material. The web forming the reflector is designated 42 and it travels guiding rolls 43, 44, 45 and 46. Roll 45 is driven by a suitable source of power to drive the web which is tensioned by an idler roll 47 on arm 48 with spring 49 moving the same to secure

the proper tension. The roll 45 is illustrated in Fig. 5 as mounted in suitable bearing brackets 50 and 51, rotatably supporting trunnions 52 and 53 while there is mounted on the shaft or trunnion 53 a worm gear 54 driven by worm 55 on the armature shaft 56 from an electric motor 57.

This web of material 42 will be of different colors such as white, red, blue, etc., which each extend a certain distance along the web. As this web travels the white, red, blue, etc. colors will be presented successively back of the sign and there will successively appear a portion of white back of all the letters which will be followed by a portion of red and as the red appears the white will disappear; thus progressively we will have a red letter D with the remainder of the letters white, followed by the letters D and E red and the remainder white and so on until all of the letters are red after which there might follow a portion of a different color in which case the letters would progressively become this different color such as blue, etc., until finally the white surface comes around again after the desired sequence of time depending upon the speed of travel of this reflector and the length of the web.

In Fig. 9 there is illustrated a device having a plurality of different reflectors 60, 61, 62, 63, each of a different color, the arrangement being such that the reflector 63 may be moved into working position by being swung about a horizontal axis into position behind the sign and followed by successively swinging the other reflectors 62, 61 or 60 into position by a handle 64, or various other means may be had for forming a transfer of one reflector of one color to a reflector of another color. The lamp for illumination may be continuous or preferably will be flashed off at the time of the change of the reflector and then flashed on again after the change.

As a particular reflector, I have found that white opal glass 70 (Fig. 4) tilted back to the correct angle to the light source is very advantageous as it serves not only to increase the volume of light from that passing through the opal glass as in the copending application mentioned while at the same time giving a white color and it also has the property of preventing light spots or irregular effects which are sometimes transmitted from a light source and reflected by a reflector.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. In a sign apparatus in combination, a hollow body having a light source in its upper part, said body having a vertical opening at a level lower than said source adapted to be covered by a translucent sign member and having an upwardly projecting strip along the lower edge of said opening, a flat interior surface inclined upwardly from the bottom of said strip beneath said source, and a reflector of transparent material resting on said flat surface and held by said strip in position to reflect through said opening, said reflector extending upwardly over said flat inclined surface and co-extensive therewith to provide a continuous reflecting surface directly opposite said opening.

2. In a sign apparatus in combination, a hollow body having a light source in its upper part, said body having a vertical opening adapted to be

covered by a translucent sign member and having an upwardly projecting strip along the lower edge of said opening, a flat interior surface inclined upwardly from the bottom of said strip beneath said source, a lip along the upper edge of said opening adapted to support the body on a sign, and a reflector of transparent material resting on said flat surface and held by said strip in position to reflect through said opening.

3. In a sign apparatus in combination, a hollow body having a light source in its upper part, said body having a vertical opening at a level lower

than said source adapted to be covered by a translucent sign member and having an upwardly projecting strip along the lower edge of said opening, a flat interior surface inclined upwardly from the bottom of said strip beneath said source, means to support said apparatus on a sign with its light source upwardly, and a reflector of transparent material resting on said flat surface and held by said strip in position to reflect through said opening.

HENRY C. SPATLEY.