July 9, 1940. T. J. D. FULLER, JR 2,206,866

HANGING TYPE OF EDGE ILLUMINATED SIGNS

Filed April 1, 1939 2 Sheets-Sheet 1

Fig. 1

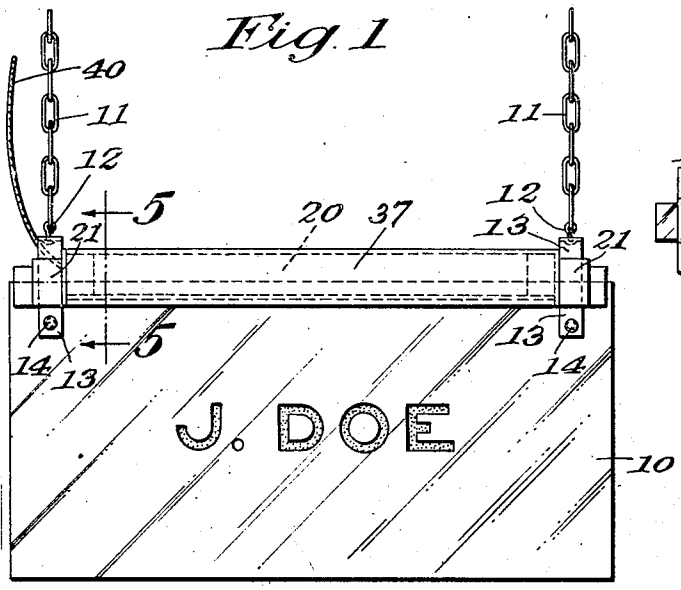


Fig. 4

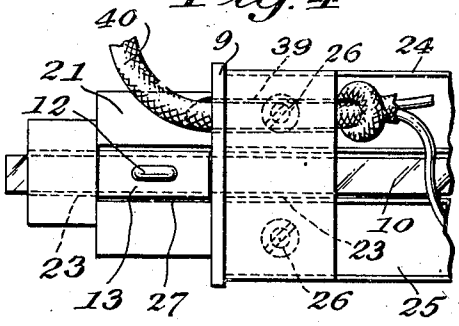


Fig. 5

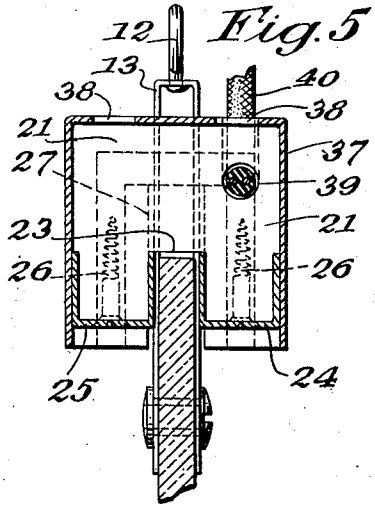


Fig. 2

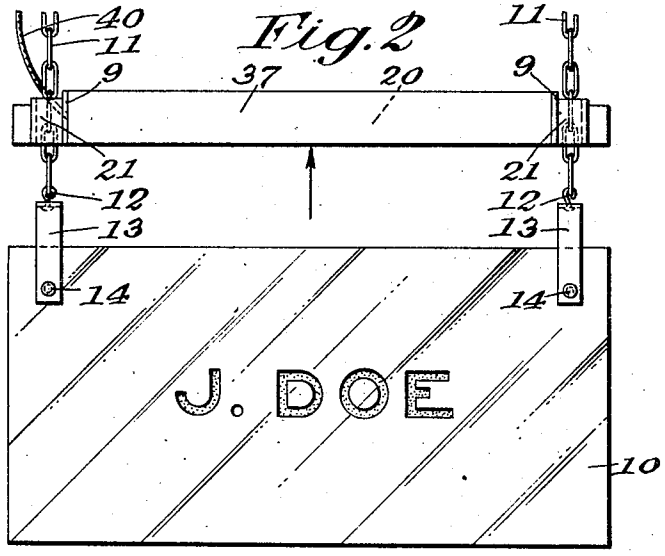


Fig. 6

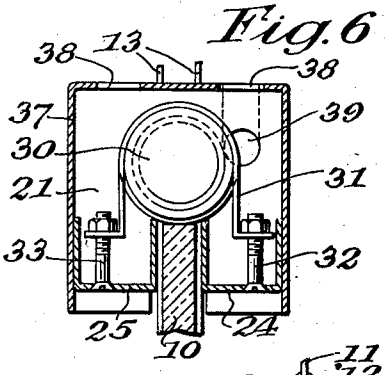
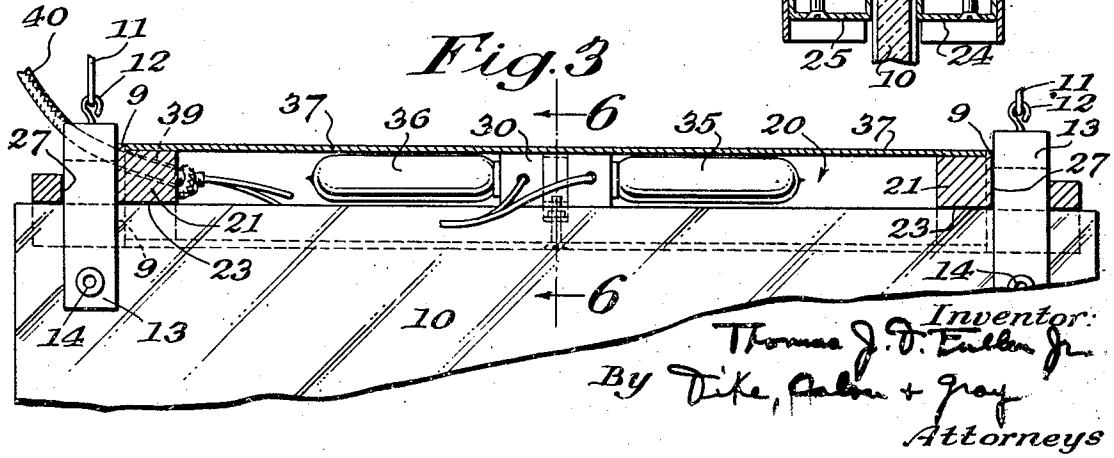


Fig. 3



Inventor:
Thomas J. D. Fuller Jr.
By Dike, Calvin + Gray
Attorneys

July 9, 1940. T. J. D. FULLER, JR 2,206,866

HANGING TYPE OF EDGE ILLUMINATED SIGNS

Filed April 1, 1939 2 Sheets-Sheet 2

Fig. 7

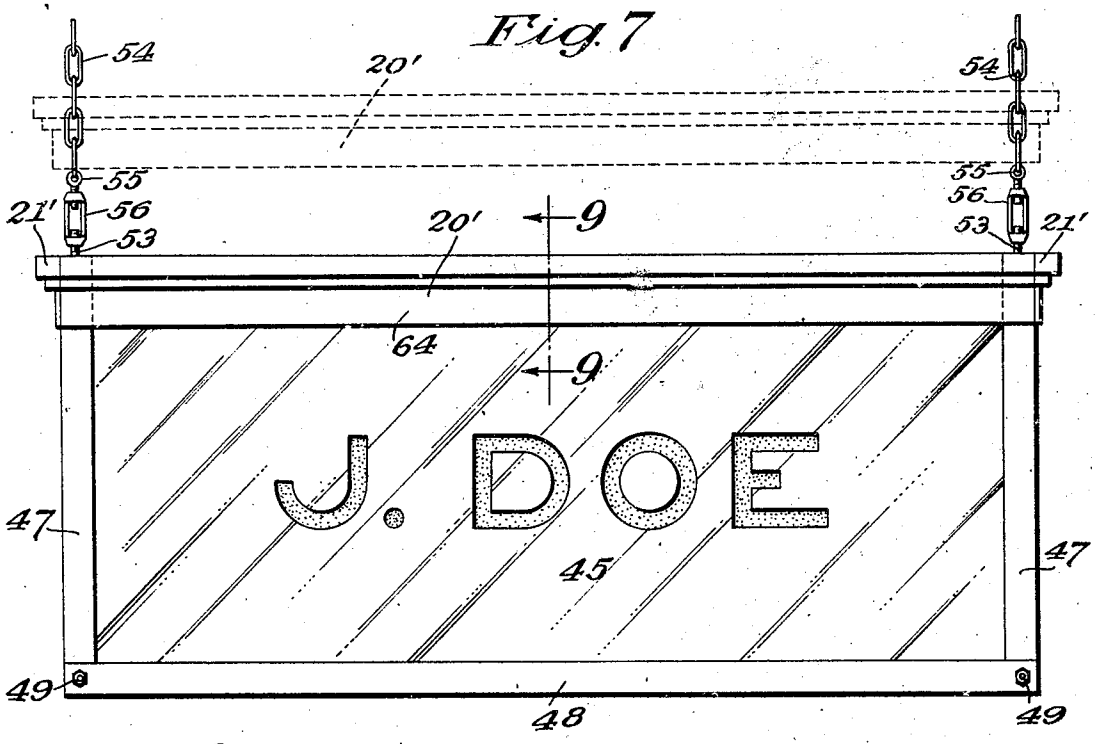


Fig. 8

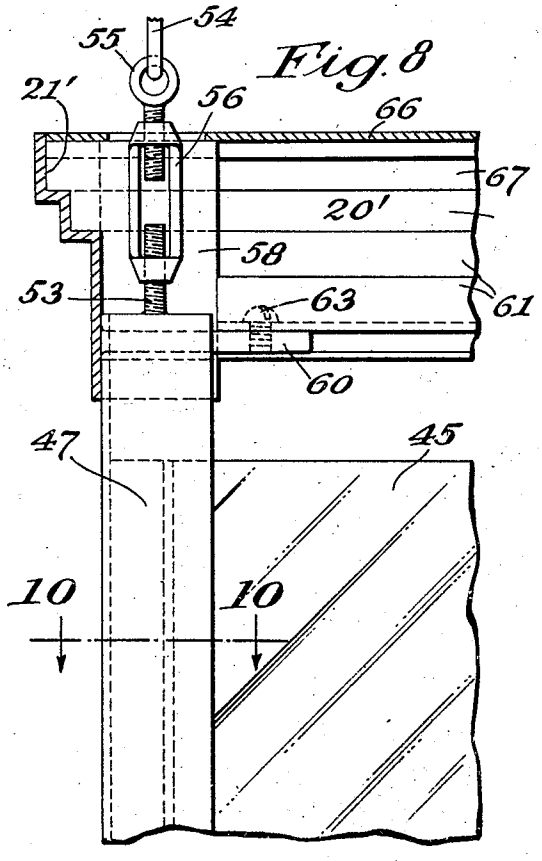


Fig. 9

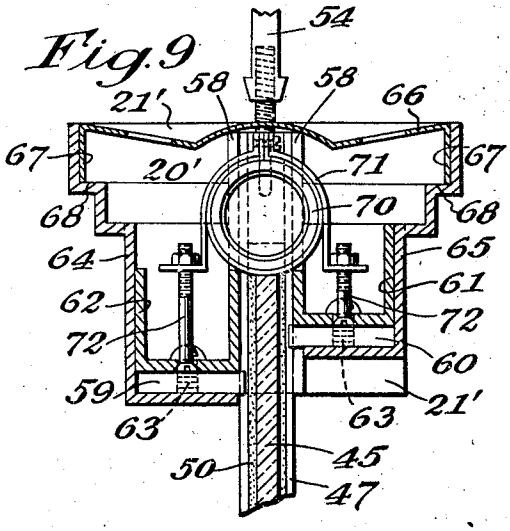
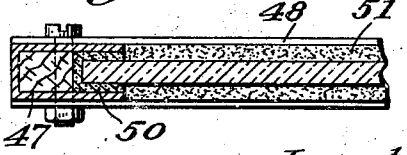


Fig. 10



Inventor:
Thomas J. D. Fuller Jr.
By Dike, Calver & Gray
Attorneys.

Patented July 9, 1940 2,206,866

UNITED STATES PATENT OFFICE

2,206,866

HANGING TYPE OF EDGE ILLUMINATED SIGNS

Thomas J. D. Fuller, Jr., Cambridge, Mass.

Application April 1, 1939, Serial No. 265,575

2 Claims. (Cl. 40—130)

This invention relates to the hanging type of edge illuminated glass signs. Such signs comprise a frame adapted to be suspended and carrying a panel of plate glass depending therefrom. The frame provides a light chamber for projecting light rays through the upper edge of the panel. Letters, figures or other symbols of the sign are etched in a face of the glass panel as by a sand blast. The rays of light which enter the upper edge of the glass at greater than the critical angle of reflection are confined within the surfaces of the glass and are caught by the etched symbols making the sign stand out clearly against the transparency of the glass.

In the hanging type of edge illuminated signs a film of dirt quickly collects upon the upper edge of the glass panel through which the light rays must pass to illuminate the sign. Heretofore, such signs have been so constructed that it was difficult, and in many cases impossible, to clean the lighted edge of the glass panel without unhanging or disassembling the sign. For this reason the upper edge of the glass panel seldom was cleaned and, consequently, the efficiency of the sign rapidly decreased.

It is an object of the present invention to increase the efficiency of a sign of this general character so as to maintain maximum illumination of the etched symbols at all times.

It is a further object of the invention to provide a sign construction in which the light source is readily available for replacement without dismantling the sign.

The invention will be more clearly understood from the following description in conjunction with the accompanying drawings: in which,

Fig. 1 is a front elevational view of a sign embodying the invention;

Fig. 2 is a view similar to Fig. 1 with parts of the sign spaced apart;

Fig. 3 is a sectional elevational view of a portion of the sign;

Fig. 4 is a fragmentary plan view of one end of the sign with one of the parts removed;

Figs. 5 and 6 are sectional views taken upon the lines 5—5 and 6—6 of Figs. 1 and 3, respectively;

Fig. 7 is an elevational view of a modified sign construction;

Fig. 8 is a fragmentary sectional elevational view of a portion of the sign illustrated in Fig. 7; and

Figs. 9 and 10 are sectional views taken upon the lines 9—9 and 10—10 of Figs. 7 and 8, respectively.

One embodiment of the invention is illustrated in Figs. 1 to 6 of the accompanying drawings and comprises a transparent glass panel 10 which may be suspended from above its upper edge by chains 11 which are connected to a hook 12 fixed in the upper end of each of a pair of spaced U-shaped metal strips 13. Each of the strips 13 straddles the upper edge of the panel 10 and is secured to the panel by a bolt 14 passing through the panel at a point spaced from its edge and fixed in each arm of the U-shaped strip 13.

A light chamber 20 is supported upon the upper edge portion of the panel 10 and comprises a frame having end blocks 21 each provided with a groove 23 formed in its bottom edge. The end member 21 are provided with vertical ribs 9 projecting laterally from each of their front and back faces intermediate their ends and are connected by spaced channel members 24 and 25, the ends of which fit the portions of the blocks between the faces thereof and the groove in the bottom surfaces and abut the ribs 9. The channel members are secured to the end members 21 by screws 26. Each of the end blocks 21 also is provided with a vertical passage 27 through which one of the U-shaped metal strips 13 projects.

A double electric lamp socket 30 rests upon the channel members 24 and 25 so as to straddle the space therebetween and is held securely in this position by a metal band 31 extending over the socket 30 and held at its ends by bolts 32 and 33 secured to the channel members 24 and 25, respectively. Electric light bulbs 35 and 36 fit opposite ends of the socket 30 and are positioned close to the upper edge of the panel 10. One of the end blocks 21 is provided with a longitudinal passage 39 to receive an electrical conduit 40 for supplying electric energy to the socket 30. An inverted U-shaped cover 37 extends between the ribs 9 of the end blocks 21 and rests upon the latter so as to enclose the lamps 35 and 36 and the channel members 32 and 33. The cover 37 is provided with a plurality of openings 38 in its top surface to provide an outlet for heat developed by the bulbs 35 and 36.

In the sign construction described the light chamber 20 is supported upon the top edge portion of the glass panel 10 and may be raised above the panel by sliding along the guides provided by the U-shaped metal strips 13 and the spaced chains 11 as indicated in Fig. 2. When the light chamber 20 is in the position indicated in Fig. 2 the top edge of the panel 20 may be readily cleaned and the light chamber 20 may

then be returned to its operative position upon the top edge of the panel as indicated in Fig. 1. This permits the frequent cleaning of the top edge of the panel 10 without unhanging or disassembling the sign. Furthermore, the structure permits ready access to the light chamber for the purpose of replacing the bulbs 35 and 36 by merely lifting the cover 37.

For larger signs, the construction illustrated in Figs. 7 to 10 is preferred. In this construction a glass panel 45 is fitted in a frame comprising vertical channel members 47 which are secured at their lower ends to the ends of a horizontal channel 48 by bolts 49. The channel members 47 and 48 are provided with felt runners 50 and 51 respectively for receiving the edges of the panel 45 to hold the panel firmly without danger of breakage. The channel members 47 extend above the top edge of the panel 45 and each has a bolt 53 secured in its upper edge as by being embedded in solder. A chain 54 connected to an eye bolt 55 at its lower end is connected to each of the bolts 53 by a turn buckle 56.

A light chamber 20' is arranged to rest upon the upper edge of the panel 45 and comprises spaced end members 21' which may be formed as a metal casting having spaced parallel walls 58 extending longitudinally inward intermediate the front and back edges of the end members. Each of the end members 21' also is provided with a front platform 59 and a back platform 60 extending laterally outward from the spaced walls 58 and longitudinally beyond the walls 58. The end members 21' are connected by spaced channel members 61 and 62, the channel members 61 extending between the platforms 60 and the channel member 62 extending between the platforms 59 and being secured thereto by screws 63. Front and rear panels 64 and 65 respectively extend between and are secured to the end members by welding. A removable cover 66 also is provided for enclosing the top of the light chamber 20' and is provided with down-turned flanges 67 adapted to rest upon shoulders 68 formed upon the front and rear panels 64 and 65 which are shaped to conform to the front and rear portions of the end members 21'. Electric light bulb sockets 70 rest upon and straddle the space between the channel members 61 and 62 and are held in position by a metal band 71 passing over the same and secured at its ends by bolts 72 fixed in the channel members 61 and 62.

The space between the plates 58 of the end members 21' provides a passage for the projecting upper ends of the channel members 47 so as to permit the sockets 70 to engage the upper edge of the panel 45 and support the light chamber 21'. Thus, in this construction also the light chamber may be raised from its normal position upon the upper edge portion of the glass panel to the position as indicated in Fig. 8 so as to permit ready cleaning of the upper edge of the panel 45. So also the cover 66 may be readily removed to permit access to the interior of the light chamber 20' to permit replacement of the light bulb in the sockets 70.

The construction of the invention permits the top edge of the glass panel to be cleaned as frequently as required and the light bulbs to be replaced without dismantling or unhanging the sign. Inasmuch as the light chamber may be readily removed from the glass panel these two parts may be separately packed for shipment and easily assembled for use and the danger of breakage during transit is greatly reduced.

I claim:

1. An edge illuminated sign comprising a transparent panel, a frame provided with a slot to receive the top edge of the panel and adapted to rest upon said panel solely by the action of gravity, said frame having a pair of vertical passages communicating with said slot, a socket for an electric light bulb carried by said frame, and means for suspending said panel from above said frame including a pair of members secured to said panel and projecting through said slot into said passages whereby said members serve as guides permitting said frame to be raised off said panel to permit the top edge of the latter to be maintained free from light obstructing material.

2. An edge illuminated sign comprising a transparent panel, a frame provided with a slot to receive the top edge of the panel and adapted to rest upon said panel solely by the action of gravity, said frame having a pair of vertical passages communicating with said slot, a socket for an electric light bulb carried by said frame, and means for suspending said panel from above said frame including a pair of members secured to said panel and projecting through said slot into said passages whereby said members serve as guides permitting said frame to be raised off said panel to permit the top edge of the latter to be amaintained free from light obstructing material, said frame having a top cover movable to permit access to said bulb when said frame is resting upon the top edge of said panel.

THOMAS J. D. FULLER, JR.