

Nov. 13, 1934.

S. CORBMAN ET AL

1,980,665

ILLUMINATED SIGN

Filed June 16, 1933

3 Sheets-Sheet 1

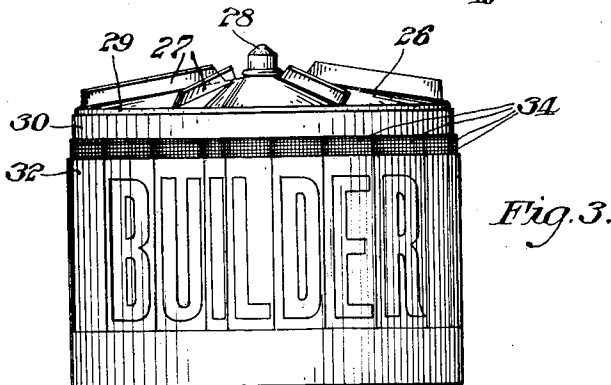
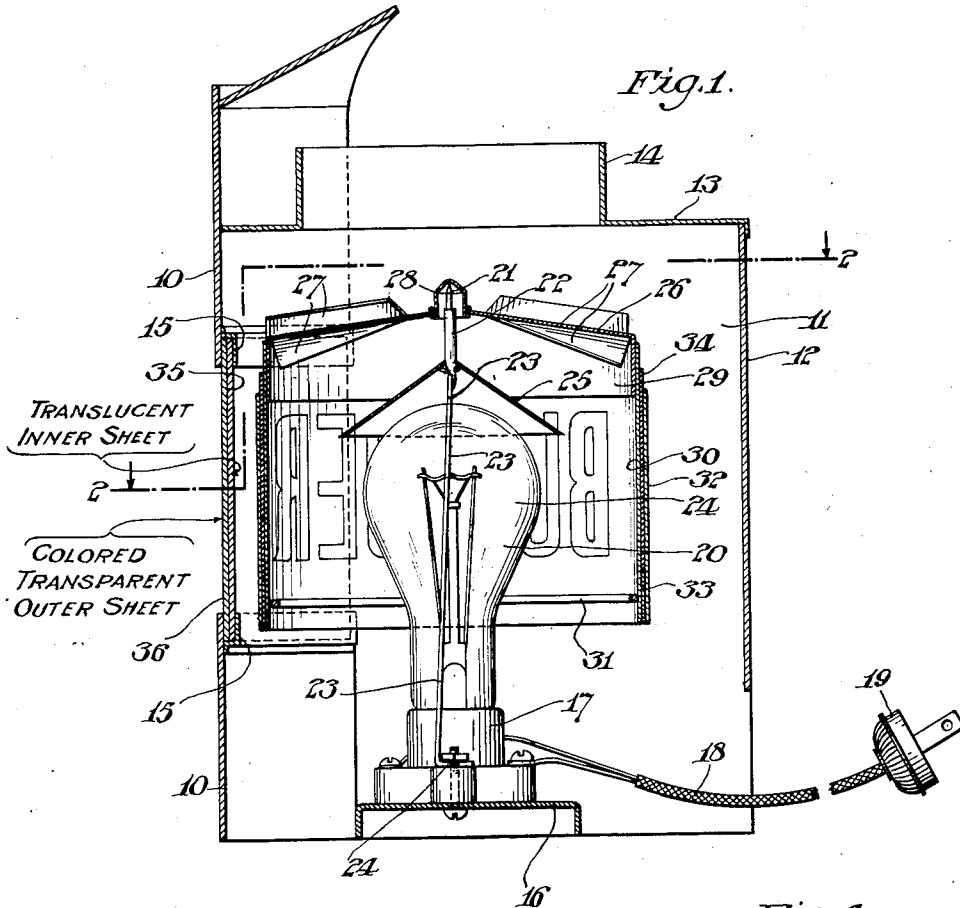


Fig. 4.



INVENTORS:
Samuel Corbman
and Joseph Corbman

BY

Jas. C. Hobensmith
ATTORNEY.

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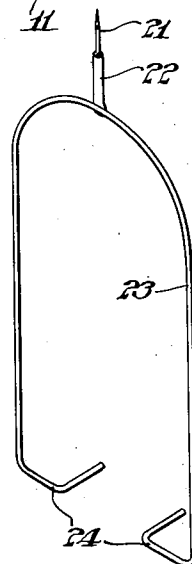
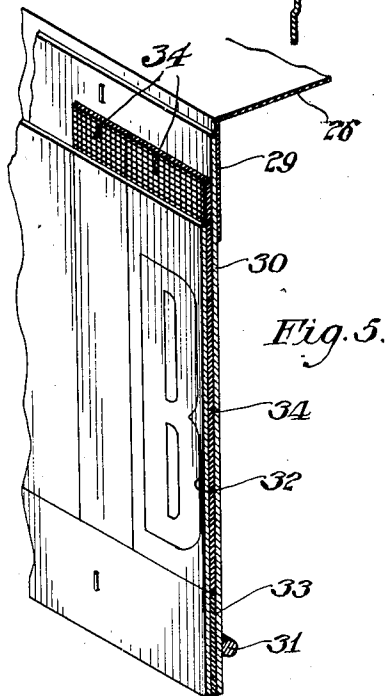
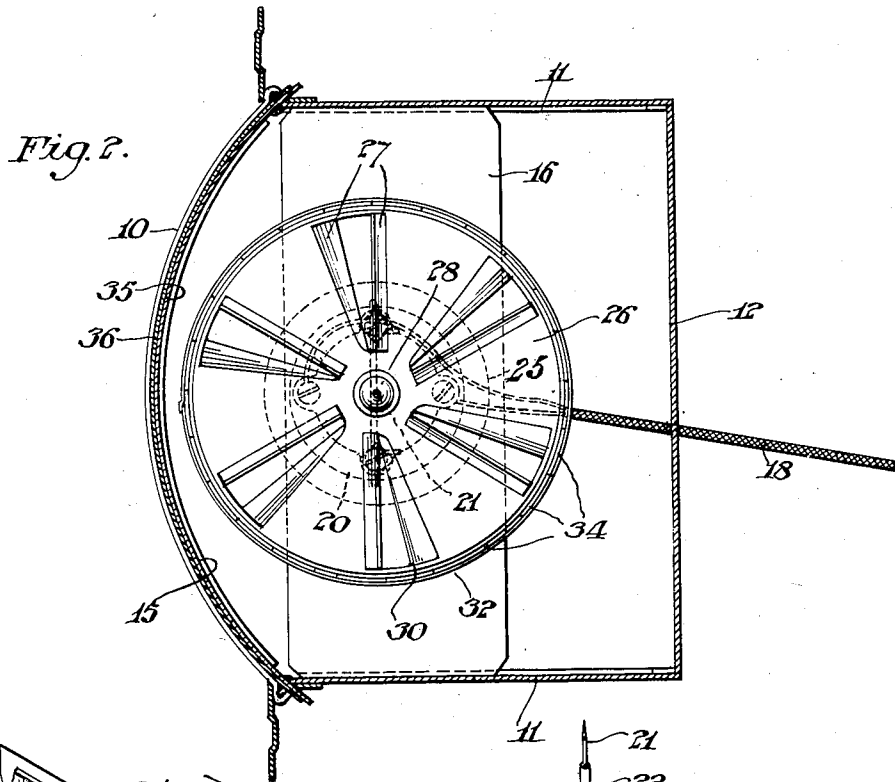
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3 Sheets-Sheet 2



INVENTORS:
Samuel Corbman
and Joseph Corbman,
BY
Jas. C. Hobbesmith
ATTORNEY.

Nov. 13, 1934.

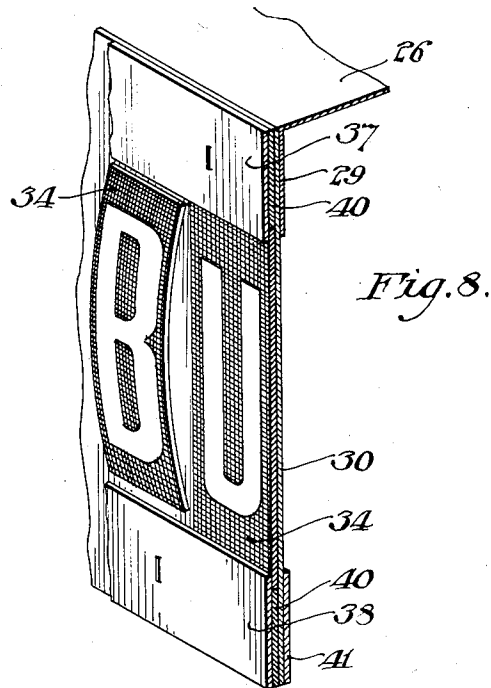
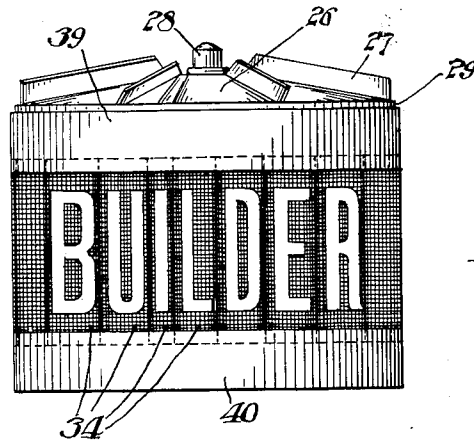
S. CORBMAN ET AL

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ILLUMINATED SIGN

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3 Sheets-Sheet 3



INVENTORS:

Samuel Corbman,
and Joseph Corbman,

BY *Gas. C. Woburn Smith*
ATTORNEY.

UNITED STATES PATENT OFFICE

1,980,665

ILLUMINATED SIGN

Samuel Corbman and Joseph Corbman,
Philadelphia, Pa.

Application June 16, 1933, Serial No. 676,032

6 Claims. (Cl. 40—40)

Our invention relates to illuminated signs, and relates more particularly to that type of sign in which the illuminated letters are caused to travel across the face of the sign by means of heated air rising from the lamp which is primarily used for illumination purposes.

The principal object of our invention is to provide an illuminated sign of the character aforesaid, which may be inexpensively constructed and operated.

A further object of our invention is to provide, in a device of the character aforesaid, means for readily and expeditiously, at the will of the owner, changing the lettering to be displayed.

A further object of our invention is to provide, in a device of the character aforesaid, improved means for displaying the illuminated letters whereby a greater degree of luminosity may be obtained, to the end that the device may be used, and the lettering rendered visible, even in places where the external light is quite bright.

A further object of our invention is to provide, in a device of the character aforesaid, improved means for adjusting the various parts so that the best possible results may be obtained in the display of the illuminated letters.

The nature and characteristic features of our invention will be more readily understood from the following description, taken in connection with the accompanying drawings forming part hereof, in which:

Figure 1 is a vertical, central, sectional view of an illuminated sign embodying the main features of our present invention;

Fig. 2 is a horizontal section thereof, taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a front elevation of a rotatable device for supporting the changeable letter strips;

Fig. 4 is an enlarged elevational view of one of the letter strips, detached;

Fig. 5 is a fragmentary perspective view, enlarged, of a portion of the device shown in Fig. 3;

Fig. 6 is a perspective view of the parts provided for supporting the rotatable device, detached;

Fig. 7 is a view similar to Fig. 3, but illustrating a modified form of the rotatable device; and

Fig. 8 is a view similar to Fig. 5, further illustrating the modified form of rotatable device shown in Fig. 7.

Referring to the drawings, in the particular embodiment of our invention therein shown,

there is provided a housing comprising a curved front wall 10, side walls 11, a rear wall 12, and a removable roof member 13.

The rear wall 12 terminates some distance above the bottom, thereby providing an inlet opening to the housing. The roof member 13 is provided with an outlet opening, surrounded by an upwardly extending collar 14. The openings in the rear wall and roof member of the housing are provided to insure a circulation of air through the housing.

The front wall 10 of the housing is provided with a window opening, along the horizontal margins of which channel members 15 are provided, in which sheets of material are mounted. Upon these sheets of material the lettering is projected and displayed, as will be hereinafter more fully set forth.

A bridge member 16 extends across the bottom of the housing from one side wall to the other. Upon the bridge member 16 there is mounted a lamp receptacle 17 of the usual type. An electrical cable 18 is connected to the lamp receptacle 17, and this cable is provided at its free end with an electrical connector 19 of any preferred type. An electric lamp 20 is mounted in and projects upwardly from the receptacle 17.

A pivot pin 21 is supported above the lamp 20, being mounted in a vertical sleeve 22 whereby said pin may be removed and replaced by another when said pin becomes worn. The sleeve 22 is secured to and carried by a U-shaped wire bracket 23, the lower ends of which are bent inwardly and suitably shaped as at 24 so as to be engaged and securely held by the bolts which also serve to secure the lamp receptacle 17 to the bridge member 16.

The bracket 23 also serves to support a conical shade 25, disposed above the lamp 20, which prevents the light from said lamp from being projected through the opening in the roof member 13 of the housing.

A rotatable device is supported on the pivot pin 21, said rotatable device having a dome portion 26, the top of which has a plurality of openings therein flanked by inclined vanes 27 struck up therefrom, so that when the heated air passing upwardly through the openings impinges against said vanes 27, the member will be rotated. A glass thimble 28 is centrally mounted in the top member of the dome 26, and serves, in connection with the pin 21 upon which it is mounted, as a substantially frictionless bearing.

The dome portion 26 of the rotatable device is provided, at the periphery of the top portion

thereof, with a downwardly projecting rim 29, which serves as a means for securing a transparent cylinder 30. The cylinder 30 is reinforced at the bottom and held in proper shape by means of a metallic ring 31 mounted therein. Another transparent cylinder 32 surrounds the transparent cylinder 30, being separated therefrom by means of an annular spacing ring 33, preferably located at the bottom. The outer transparent cylinder 32 terminates at the top preferably below the top of the inner transparent cylinder 30, but above the lower margin of the rim 29 of the dome 26.

By the foregoing arrangement, there is provided an annular pocket between the inner and outer transparent cylinders, and in this pocket a plurality of removable letter strips 34 are mounted. The letter strips 34 are preferably made of transparent material, having the letters blocked out thereon by opaque paint or printing ink. The letter strips 34 are preferably of such length that when the bottom edges thereof are resting upon the annular spacing ring 33, the top edges will project above the top edge of the outer transparent cylinder 32.

In this manner, the letter strips 34 may be readily inserted in and removed from the annular pocket provided between the two transparent cylinders 30 and 32, and when so positioned therein will be firmly held, so that the light from the lamp may pass through the transparent portions of the same and be projected on the screen which is mounted in the window opening of the housing.

The screen upon which the letters are projected comprises two sheets, the inner sheet 35 being made of any preferred translucent material, and the outer sheet 36 being made of any preferred colored transparent material.

The screen sheets 35 and 36 are, as hereinbefore pointed out, mounted in the channel members 15 which are provided along the horizontal margins of the window opening in the front wall 10 of the housing, the arrangement being such that said screen sheets may be readily slipped in and out from the side when it is desired to change or renew the same.

We have found that when the projection screen is made as aforesaid, namely, of an inner translucent sheet and an outer colored transparent sheet, a high degree of luminosity is obtained, so that the device may be used even where the external light is of considerable strength. Under such conditions, the projected letters will be visible and quite clear. Furthermore, the color of the projection screen may be readily changed, by merely slipping out the outer colored transparent sheet 36, and substituting therefor a similar sheet of different color.

In Figs. 7 and 8 of the drawings, there is illustrated a modified form of rotatable device, in which the outer transparent cylinder 32 is omitted. In this construction there are provided two annular retaining members 37 and 38, and in conjunction with said annular retaining members there are provided annular spacing members 39 and 40, respectively. Each of the spacing members 39 and 40 is made of less width than its retaining member, thereby to provide, at the top and bottom, annular pockets into which the top and bottom portions of the letter strips 34 are adapted to be positioned. In this instance, the letter strips are sprung into

position by flexing the same, as shown in Fig. 8 of the drawings.

In the structure shown in Figs. 7 and 8 of the drawings in lieu of the stiffening ring 31 shown in Figs. 1 and 3, there is provided a flat metallic annulus 41 for stiffening the lower portion of the rotatable member.

The operation of the device will be readily apparent. The lettering which is to appear upon the sign is first determined, and a proper selection of letter strips is then made from a stock of the same. The strips 34 are placed in the proper position in the pocket or pockets of the rotatable device, the rotatable device preferably having been removed from the housing for this purpose. The rotatable device is then replaced upon the pivot pin 21.

The lamp when lighted will cause the air within the rotatable device to become heated, whereupon the same will rise and impinge against the inclined vanes 27 of the dome portion 26 of the rotatable device, causing said rotatable device to be actuated about the pivot pin 21. This in turn will cause the lettering which is projected on the screen to travel slowly across the same, thereby providing a sign which will compel the attention of the passerby.

We claim:

1. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a transparent cylinder disposed around said lamp, an annular member spaced with respect to said transparent cylinder thereby to provide an annular pocket, a plurality of letter strips interchangeably mounted in said annular pocket, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.

2. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a dome portion provided with inclined vanes, a transparent cylinder supported by and depending downwardly from the dome portion of the rotatable device, an annular member spaced with respect to said transparent cylinder thereby to provide an annular pocket, a plurality of letter strips interchangeably mounted in said annular pocket, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.

3. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a transparent cylinder disposed around said lamp, a pair of annular members spaced with respect to said transparent cylinder thereby to provide annular pockets, a plurality of letter strips interchangeably mounted with their upper and lower ends positioned in said annular pockets, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.

4. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a dome portion provided with inclined vanes, a transparent cylinder supported by and depending downwardly from the dome portion of the rotatable device, a pair of annular members spaced with respect to said transparent cylinder thereby to provide annular pockets, a plurality of letter strips interchangeably mounted in said

annular pockets, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.

- 5 5. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a dome portion provided with inclined vanes, an inner transparent cylinder supported by and depending downwardly from the dome portion of the rotatable device, an outer transparent cylinder surrounding the inner transparent cylinder and spaced with respect thereto thereby to provide an annular pocket between said cylinders, a plurality of letter strips interchangeably mounted in said annular pocket, the upper ends of said letter strips projecting above the top edge of the outer cylinder, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.
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- 15
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6. An illuminated sign comprising a housing, a lamp mounted therein, a rotatable device pivotally mounted above said lamp and having a dome portion provided with inclined vanes, an inner transparent cylinder supported by and depending downwardly from the dome portion of the rotatable device, an outer transparent cylinder surrounding the inner transparent cylinder, a ring interposed between the inner and outer cylinders at the bottom thereof to space the same and thereby provide an annular pocket therebetween, a plurality of letter strips interchangeably mounted in said annular pocket, the lower ends of said letter strips abutting against the spacing ring and the upper ends thereof projecting above the top edge of the outer cylinder, the housing having a window opening, and a screen extending across said window opening upon which the lettering is projected.

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SAMUEL CORBMAN, 95
JOSEPH CORBMAN.

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