March 24, 1931. S. J. CALLENDER 1,797,322

CHANGEABLE LETTER SIGN

Filed Aug. 27, 1929 3 Sheets-Sheet 1

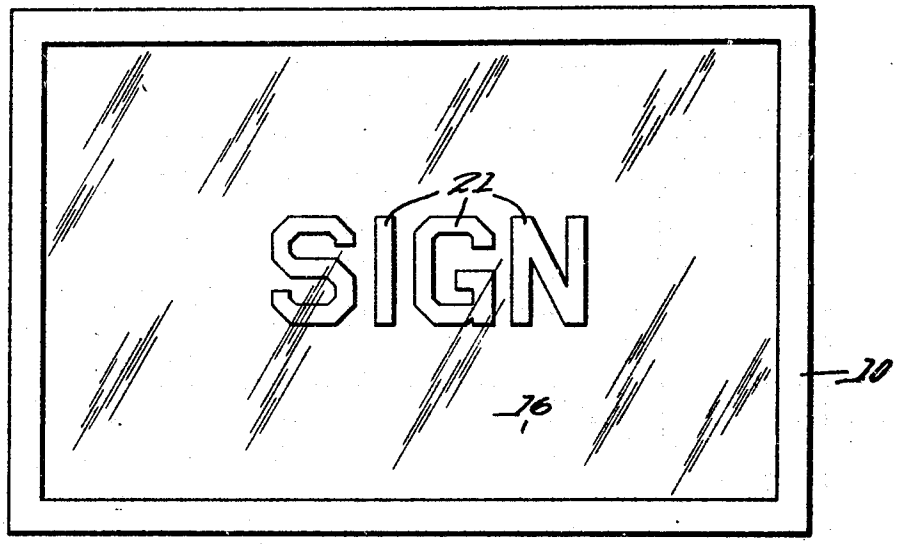


Fig. 1.

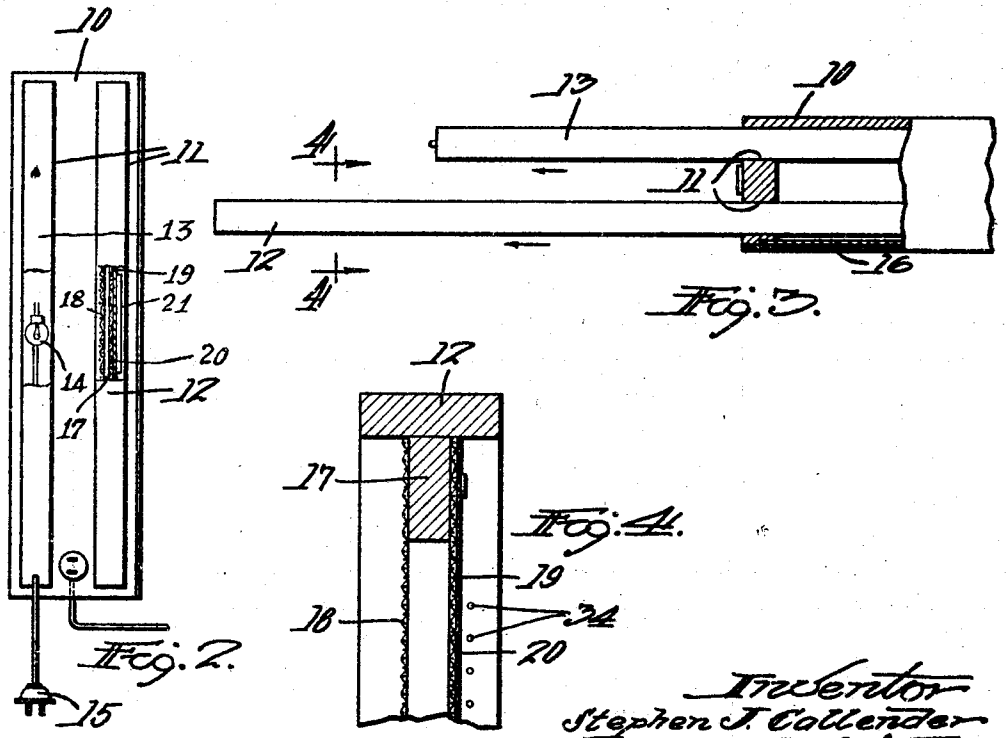


Fig. 2.

Fig. 3.

Fig. 4.

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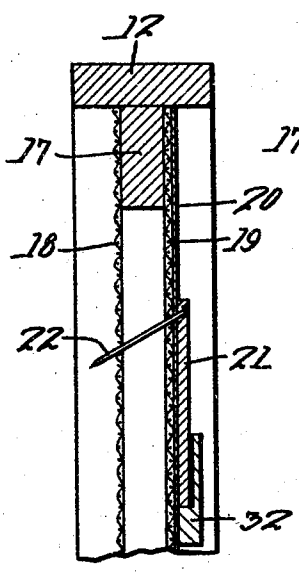


Fig. 5.

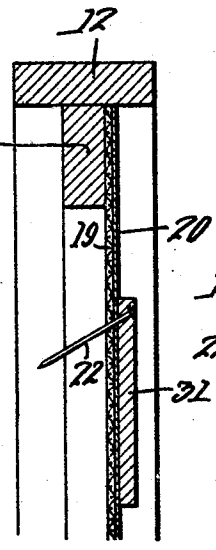


Fig. 8.

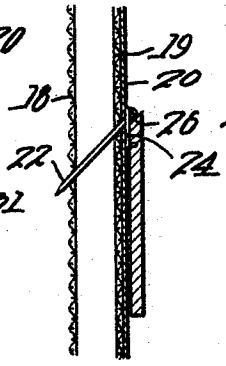


Fig. 9.

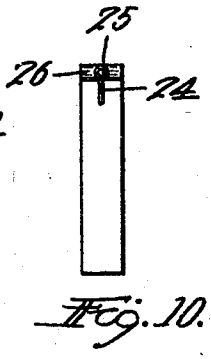


Fig. 10.

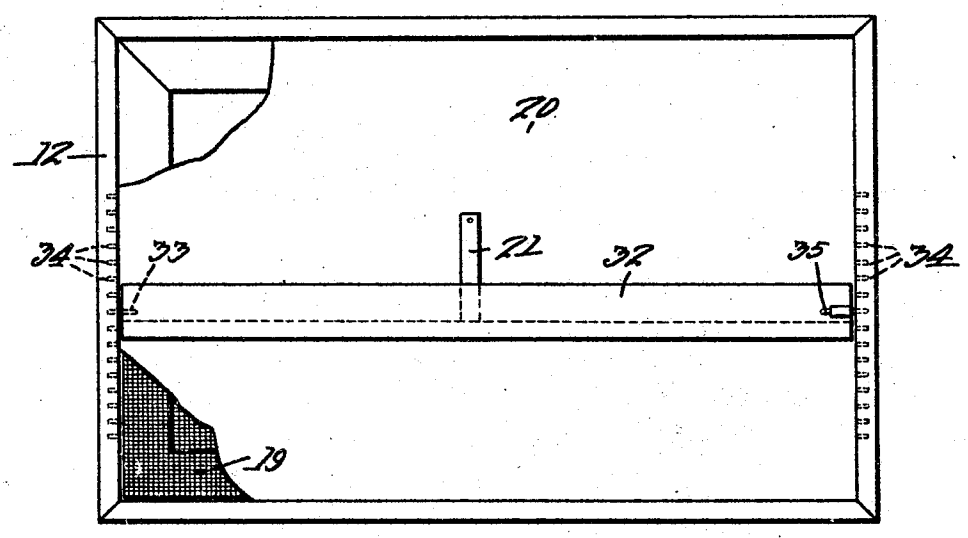


Fig. 6.

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CHANGEABLE LETTER SIGN

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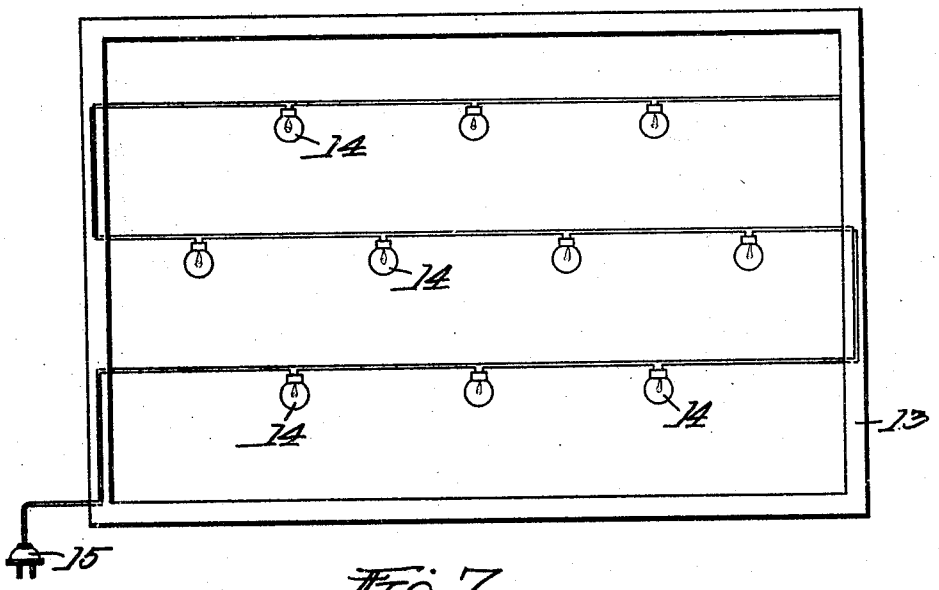


Fig. 7.

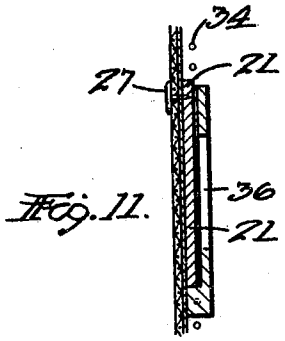


Fig. 11.

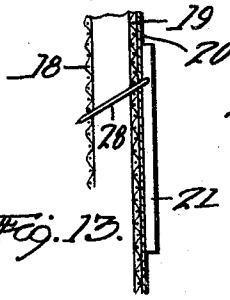


Fig. 13.

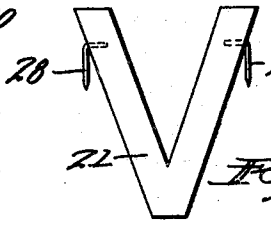


Fig. 14.

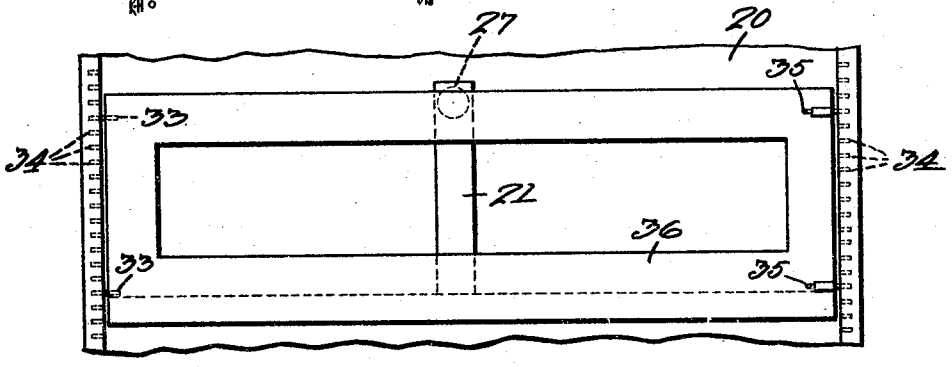


Fig. 12.

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UNITED STATES PATENT OFFICE

STEPHEN J. CALLENDER, OF WORCESTER, MASSACHUSETTS

CHANGEABLE LETTER SIGN

Application filed August 27, 1929. Serial No. 388,839.

This invention relates to a sign of the type in which removable letters or opaque individual characters are placed on the front and which is illuminated from the rear.

The principal objects of this invention are to provide a sign of this type of a simple and inexpensive construction in which the characters can be placed in position very easily and removed and replaced by others with very little trouble; to provide a construction which, while made very inexpensively, will hold the characters in position without danger of their becoming displaced or loosened accidentally; to provide means for lining up the characters and locating them in the proper position on the sign and to provide various improvements in the several features of construction.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which

Fig. 1 is a front elevation of a sign constructed in accordance with this invention;

Fig. 2 is an end elevation thereof;

Fig. 3 is a horizontal sectional view showing the parts in the act of being drawn out of the sign;

Fig. 4 is a sectional view of the letter frame on the line 4—4 of Fig. 3;

Fig. 5 is a vertical sectional view of a preferred form of the letter frame showing the means for attaching the letters and means for locating them;

Fig. 6 is a front elevation of the letter frame and of the guiding means in position and without any letters. The front fabric or parchment surface of the letter frame is broken away at two corners showing the interior construction;

Fig. 7 is an elevation of the electric lighting system;

Figs. 8 and 9 are sectional views like Fig. 5 showing modifications;

Fig. 10 is a rear elevation of one of the letters attached as shown in Fig. 9;

Figs. 11 and 13 are sectional views like Fig. 5 showing further modifications;

Fig. 12 is an elevation of the means for locating the letters when they are put on in the form shown in Fig. 11; and

Fig. 14 is a front view of a letter attached as shown in Fig. 13.

This sign is intended for places in which the letters or characters are changed frequently and one of the principal features thereof is to provide for removing or replacing the characters in a simple and convenient manner. The sign is formed, as indicated especially in Figs. 1, 2 and 3, in the form of a rectangular box or casing 10 having openings 11 in one end which may be weather tight for outdoor use. Through these openings are introduced two frames, a frame 12 for the characters and a frame 13 for the lights. This frame 13 is shown in Fig. 7 and the details thereof do not constitute a feature of this invention except that it shows the lights 14 arranged symmetrically in this frame 13 and provided with a usual plug 15 or other electrical connection so that the light is distributed uniformly in the casing 10 behind the frame 12. These two frames are removable as shown in Fig. 3 but the light frame has to be removed only for the replacing of the lamps. The front of the casing or housing 10 is open except for a sheet 16 of glass or other translucent or transparent material, over the front of the sign and through which the characters can be seen.

The frame 12 preferably is provided with a rectangular frame 17 inside to which are secured two ordinary wire screens 18 and 19, the latter being covered by a fabric paper or parchment 20 if desired. These two screens are of the ordinary window screen or mosquito screen character, of woven wire which may be fine square mesh or any other form as may be desired. These two screens are separated a distance equal to the width of the frame 17 and on account of their being spaced apart, a firm support is provided for the letters or characters 21.

In the form shown in Fig. 5, which is the preferred form, these characters are of opaque solid material and may be of thin sheet form and one or more headed nails or pins 22 are inserted through them in an in-

clined direction with their heads at the front of the characters. The characters are located in place and the nails put through the two screens at an inclination as shown in that figure. In this position they obviously hold the characters against dropping out or displacement. One nail is put through if the character has only one thin portion at the top, as in the case of the letter I, but if it has a horizontal portion at the top or two upward projections, as shown in the letters S, G and N in Fig. 1, two nails are inserted. The letters are provided with inclined perforations for this purpose and the nails can be inserted after the letters are in place on the front screen 19.

It will be obvious that there are only very small wires in the way and the nails can be put through, no matter where the letters are placed, with only a possible slight displacement. This provides a firm anchorage with the nails held in position at two points at a distance from each other. The contact of the character along its back with the surface of the screen also assists in preventing dislodgment of the nails themselves, the nails being inserted and the characters hanging down by gravity and acting to pull the free ends of the nails up against the wires just above in the rear screen.

In the form shown in Fig. 8 only one screen 19 is employed. This is possible in this case because the character 31 is of such thickness that when the nail passes through it, its position will be fixed by the thick character of the letter itself and the nail cannot get out of its inclined position. However, this is not such a firm anchorage.

In the form shown in Figs. 9 and 10, instead of passing the nail 22 through the character, the latter is provided with a hook 24 extending up from the rear side and securely fastened in the character when the nail is introduced through the eye 25 in the hook. In this case the top of the character 26 is slanted off at the angle at which the nail is to be inserted.

In the form shown in Fig. 11 a different fastening device is shown in the form of a tack or thumb tack 27 which passes through the screen 19 into the body of the character 21 from the opposite side.

In Figs. 13 and 14 is shown the form in which fastening pins 28 of L-shaped character are introduced into two depressions located in alignment in the edges of the character. These pins are capable of swinging and two screens are necessary in this case.

For the purpose of locating the letters I have shown a plate 32 having a ledge for supporting the bottom of the characters 21 to insure that these characters will be in alignment. These plates 32 are provided with studs 33 in their ends which fit in notches 34 arranged at regular intervals in the frame 12. The stud on one end of the plate 32 is stationary but a spring stud 35 or, at least a removable one, is located on the other end to release the plate from the notches and allow it to be removed or placed in a different position.

When the fastening device 27, shown in Figs. 11 and 12, is employed the plate 32 is replaced by a frame 36 which has two cross bars, one at the top and one at the bottom. The top one is required to serve as a resisting member to press the character 21 against, while the tack 27 is forced in from the other side.

It will be seen that these frames or plates constitute means for supporting the bottoms of the characters and that they are necessarily placed horizontally on account of the notches or pins and the line of characters therefore is located horizontally without any trouble. This, of course, is done when the frame 12 is drawn out of the casing 10 and this frame is then pushed back in and the sign is completed.

In the forms shown, the letters or characters of the sign are easily located in position and held there against accidental displacement for any desired length of time. The letters are not easily moved out of place accidentally but they are very easily removed when it is desired to do so.

Although I have illustrated and described only a few forms of the invention I am aware of the fact that other modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited in this respect but what I do claim is:—

1. In a sign, the combination with a casing, a removable frame therein, said frame having a vertical screen, characters on the face of said screen and fastening devices extending through the characters and screen to hold them in position, of a second frame removably carried by said casing and having a series of electric lamps supported thereby, spaced uniformly in an area behind said screen and wiring for said electric lamps.

2. In a sign, the combination of a casing, a removable frame therein, a screen carried by said frame, characters adapted to be mounted on the face of said screen, said frame having opposite notches, and a plate provided with studs adapted to secure the plate in the notches to constitute a guide for use in the placing of the characters in proper position on the screen.

3. In a sign, the combination of a frame, a screen carried by said frame, characters adapted to be mounted on the face of said screen, said frame having opposite notches, and a plate provided with studs adapted to secure the plate in the notches, said plate constituting a guide for the placing of the

characters in proper position on the screen, said plate having an upper bar across near the top thereof and said fastening devices for the letters extending through the screen from the rear within the area of said upper bar.

4. As an article of manufacture, a sign comprising a pair of screens spaced apart, a character adapted to be located on the front of the screens and pins pivotally mounted on the opposite edges of said characters and adapted to be inserted through the meshes of the two screens to hold the characters in position.

5. In a sign, the combination of a frame, a pair of screens spaced apart and supported by said frame, opaque characters on the front of the front screen, fastening devices extending at an inclination through both screens and the opaque characters and removable from all of them, and illuminating means behind the other screen.

In testimony whereof I have hereunto affixed my signature.

STEPHEN J. CALLENDER.