E. I. WILSON.

ILLUMINATED SIGN.

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1,272,593.

Patented July 16, 1918.

Fig. 1.

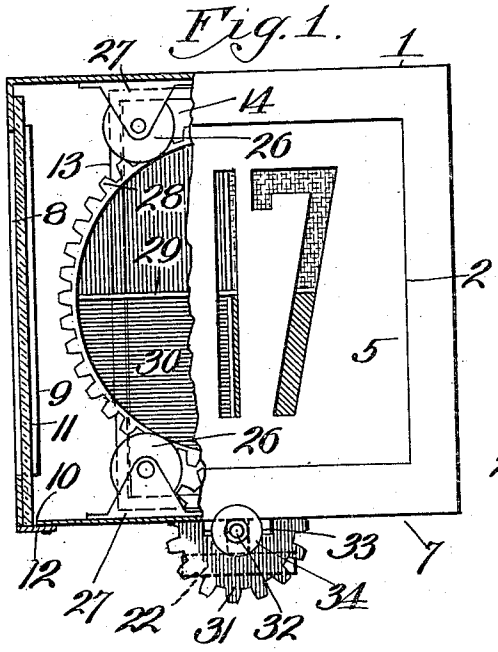


Fig. 2.

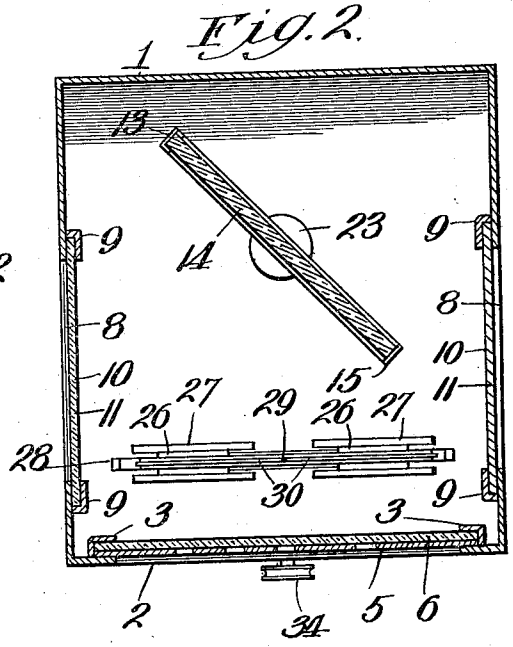


Fig. 3.

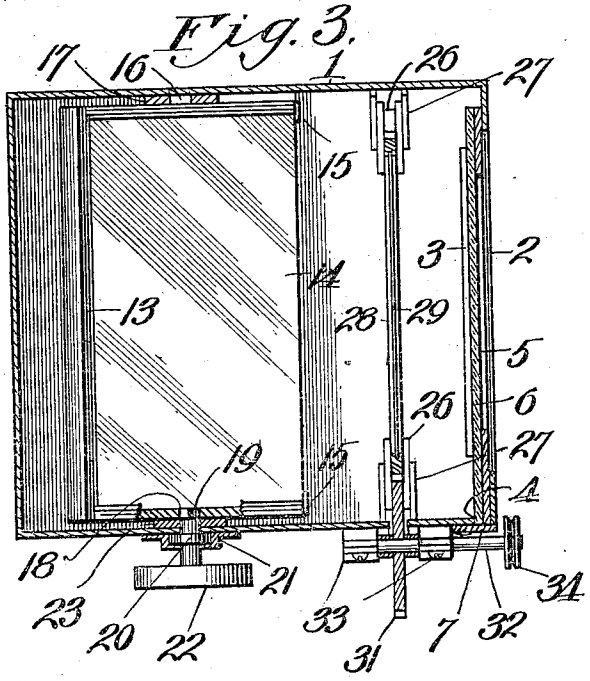
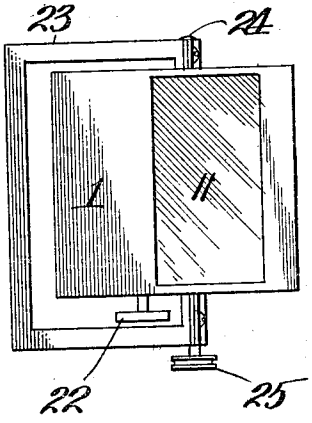


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ILLUMINATED SIGN.

1,272,593. Specification of Letters Patent. Patented July 16, 1918.

Application filed January 5, 1916. Serial No. 70,419.

To all whom it may concern:

Be it known that I, EDGAR I. WILSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Illuminated Signs, of which the following is a specification.

This invention relates to illuminated signs, and has for its object to produce a device of this character illuminated by reflected and diffused light thrown upon the face of the sign from the rear thereof. More specifically my object is to produce a sign in the form of a casing containing an opening through which enter the rays of light from a distant source, such as a street lamp, a mirror for reflecting such light onto the sign plate, and a translucent plate for diffusing said light.

With the object named in view, the invention consists in certain novel and peculiar features of construction and combinations of parts as hereinafter described and pointed out in the appended claim, and in order that it may be fully understood reference is to be had to the accompanying drawing, in which—

Figure 1, is a view partly in front elevation and partly in vertical section of a sign embodying my invention.

Fig. 2, is a central horizontal section.

Fig. 3, is a central vertical section but showing the reflector or mirror in elevation.

Fig. 4, is a side elevation of the sign mounted for rotation in a supporting frame for the purpose of producing a flash light effect.

In the said drawing, where like reference characters identify corresponding parts, 1 is a casing, shown as rectangular in form, provided with an opening 2 in its front wall and with vertical angle strips 3, along the vertical margins of said opening to provide vertical grooves communicating with the opening 4 in the bottom of the casing, through which opening the sign plate 5 is inserted into the casing to cover the opening 2. The sign plate is shown as opaque and provided with openings which constitute the sign, such for instance as "1117" which may represent a house number, Fig. 1 disclosing only the last figures of said number. If the opaque plate provided with openings or the equivalent thereof, such as transparent figures, is provided, the sign plate will preferably be backed up by a translucent plate 6 introduced into the casing through the opening 4 and held upright by fitting in the grooves mentioned. Any means may be provided for supporting the plates from below, such for instance as one or more turn buttons 7.

The casing is provided in its opposite sides with openings 8, and at the vertical margins of said openings vertical angle strips 9 are secured to form grooves communicating with the openings 10 in the bottom of the casing, through which openings plates 11 are slipped up into the casing to cover the openings 8. In practice it is preferred that only one of the plates 11 shall be translucent as the light to be reflected preferably enters the case at one side only. The plates will be interchangeable so that the translucent plate can be disposed at the proper side. The sign is thus made to receive a light from a street lamp or the like located at one side or the other of the house upon which the sign is mounted. The plates 11 are supported within the casing by means of the underlying turn buttons 12. Arranged horizontally within the casing is a U-shaped frame 13 for holding a reflector 14. The reflector will preferably be in the form of a mirror or other device for producing direct reflection onto the translucent plate 6 arranged back of the sign plate, as shown. The end of the frame 13 has lips 15 to be bent against one end of the mirror to guard against accidental sliding movement thereon of the frame. The frame is provided at its upper end with a trunnion 16 pivotally mounted in the top of the case and a spring washer 17 is interposed between the frame and the top of the case to aid in preventing accidental rotative movement of the reflector.

The lower arm of the frame in alinement with the trunnion 16 is provided with an angular hole 18 for receiving the correspondingly formed upper end of a short shaft 19 extending through the bottom of the casing, and said shaft is provided with an enlargement 20 engaged by an angle ring 21 secured to the bottom of the casing for the purpose of preventing downward movement of the shaft. Secured on the lower end of the shaft is a small wheel 22 by which the mirror may be turned to dispose it in the proper angular position to reflect light rays which enter the casing through the translucent plate 10 onto the sign plate. A

spring washer 23 is interposed between the bottom of the casing and the reflector carrying frame 13 to coöperate with washer 17 in preventing accidental turning movement.

If it is desired to produce a flash light effect, a suitable motor may be belted or otherwise geared to wheel 22 to rotate the mirror so that the same shall reflect light onto the sign plate but momentarily in each revolution. A flash light effect can also be produced by mounting the casing rotatably in a suitable support and using a motor for turning it. In Fig. 4, I show a U-shaped frame 23 for securement to a suitable support and provide the casing with trunnions 24 journaled in the arms of said frame, and mounted on the end of one of the trunnions is a belt wheel 25 for engagement by a suitable driving belt or its equivalent.

For advertising or display purposes it may be desirable to produce a flash light effect by the means described or in any other equivalent manner, but for number signs for houses no other effect is desirable and the sign can therefore be of simple, strong, compact and economical construction.

For display or advertising purposes the sign may be equipped with means for producing changing color effects. One simple mechanism for producing a changing color effect is to interpose a multicolor rotating translucent disk between the mirror and the sign plate. For the support of such a disk the drawings disclose a set of four grooved rollers 26 journaled in brackets 27, receiving and supporting a peripherally toothed ring 28, this ring being provided with cross pieces 29 as a support for segments 30 of colored celluloid or glass. A cog pinion 31 extends up into the case and meshes with the toothed ring 28 to drive the same, and said pinion is mounted on a short shaft 32 journaled in suitable bearings 33 secured to the bottom of the casing, and mounted on the front end of the shaft is a grooved pulley 34 to which power may be transmitted by a belt for effecting rotation of the ring 28.

A sign of the character described, that is one which embodies a sign plate, a side opening, and an adjustable mirror for reflecting light onto the sign plate will be found most efficient and desirable as number signs for houses in streets lighted by gas or electricity, as by the proper adjustment of the mirror a sign mounted on the front of a house can be illuminated from a street lamp located a half block or more away.

From the above description it will be apparent that I have produced an illuminated sign possessing the features of advantage enumerated as desirable and I wish it to be understood that while I have illustrated the preferred embodiment of the invention I reserve the right to make all changes falling within the spirit and scope of the appended claim.

I claim:

A sign, comprising a casing provided with an opening through which light rays may enter, a sign plate, a horizontally turning reflector within the casing for reflecting the light entering the casing through said opening, onto said sign plate, a multi-color translucent disk in the casing for intercepting the reflected rays of light to the sign plate to effect changes of color in said rays, a toothed ring carrying said translucent disk, a plurality of grooved wheels for supporting said ring, and a driven cog wheel projecting into the casing and engaging said ring to impart rotation thereto.

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

EDGAR I. WILSON.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."