

M. C. FRANK.
LUMINOUS INDICATOR.
APPLICATION FILED JULY 17, 1916.

1,321,024.

Patented Nov. 4, 1919.

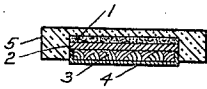


Fig. 1

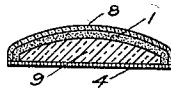


Fig. 2



Fig. 3



Fig. 4

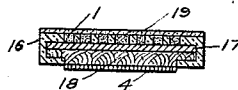


Fig. 5

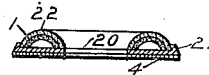


Fig. 6

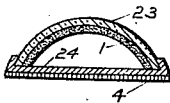


Fig. 7

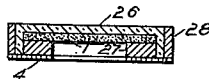


Fig. 8

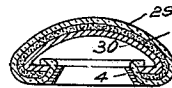


Fig. 9

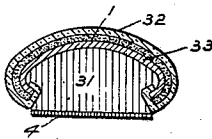


Fig. 10

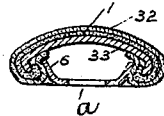


Fig. 11

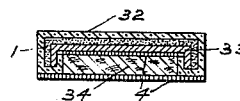


Fig. 12

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LUMINOUS INDICATOR.

1,321,024.

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To all whom it may concern:

Be it known that I, MAXWELL C. FRANK, citizen of the United States, residing at Piedmont, county of Alameda, State of California, have invented certain new and useful Improvements in Luminous Indicators, whereof the following is a specification.

This invention relates to indicators and more particularly to self-luminous indicators adapted to be attached to or in the vicinity of an object, such as an electric switch, door knob and the like, which must frequently be located in the dark.

The primary object of the invention is to provide a button shaped indicator for this purpose, having a coating or layer of luminous or phosphorescent material suitably protected by a transparent covering and provided with means enabling the device to be quickly and easily attached.

The invention also aims to provide an indicator of this nature which shall be of simple construction, cheap to manufacture, very practical and durable.

With these and other objects in view the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter fully described, illustrated and claimed.

In the one sheet of drawings; forming part of this application:—

Figure 1 is a transverse section through one form of indicator.

Fig. 2 is a section through a luminous indicator showing the use of varnish as a protective covering for the luminous material.

Figs. 3 and 4 are sectional views showing other embodiments of the invention.

Fig. 5 is a sectional view through an indicator, showing perforations containing luminous material.

Fig. 6 is a sectional view showing a self luminous indicator in the form of an annulus.

Figs. 7 to 12 inclusive are sectional views showing further embodiments of my invention to be hereinafter described in detail.

These figures show my invention in a variety of different forms in which it may be conveniently embodied. Each of these forms contains the essential features of the invention, which are; a self-luminous material; a transparent protective covering in front of the same, such as celluloid, varnish, etc.; a protecting and light reflecting back-

ing behind the same; and means for attaching the indicator composed of those members, to a desired object.

Referring now more especially to Fig. 1; 1 designates a coating or layer of self-luminous composition. This luminous material is protected on its outer face and edges by a transparent covering 5. Behind the luminous material is a protective backing, which, in this instance, may consist of a layer of soft material such as felt, 3, preferably faced with a thin sheet of polished metal, or metal foil, 2, which is non-absorptive of light. The under side or back of the indicator may be completed by a coating of adhesive 4, by which it may be attached to or near an object which is to be indicated in the dark.

The other figures of the drawing show these same members in various shapes. In all of them the luminous material is marked 1, and the coating of adhesive, 4. But the transparent covering for the front of the indicator and the protective backing I have designated by other reference letters. Thus;—

In Fig. 2 the transparent covering, which in this case is varnish, is marked 8, and the protective backing is 9, and may be of porcelain.

In Fig. 3 the transparent cover is of celluloid, 12, and is continued around behind the backing as at 13. The protective backing is composed of felt 11 with its reflecting facing 10, similar to the form shown in Fig. 1. The adhesive 4 in this case does not cover the whole base of the indicator, but only an annular part thereof.

In Fig. 4 the form is similar to Fig. 3, the celluloid cover 15 extending around the edges and behind the device, and 14 is the backing.

In Fig. 5 the luminous material is placed in openings in the celluloid shell 16, and covered by varnish 19, and the backing is composed of felt 18 faced with metal 17.

In Fig. 6 the backing is a metal annulus 20, with an upturned supporting flange 21, which clamps the transparent ring 22.

In Fig. 7 the indicator is the same as in Fig. 6, but of convex button shape. 24 is the reflecting backing, and 23 the transparent cover.

In Fig. 8, in addition to the cover 26 and the backing 27, which may be of annular

shape as shown, there is a band 28 of metal or other material, for holding the members in position.

In Fig. 9 the indicator is of hollow button form, with an opening at the back for convenient attachment to a stud, which may enter said opening. The celluloid cover 29 is carried clear around and into the hollow of the button, and incloses the backing 30. The adhesive 4 when desired may be applied as shown.

In Fig. 10, we have the same hollow button, with the cover 32 extending around and inclosing the backing 33, and the hollow of the button containing a filler 31, which may be of plaster-of-Paris.

In Fig. 11 the hollow button has its cover 32 extending around and also inclosing the backing 33. In this case the supporting and adhesive means is the metallic ring 6.

Fig. 12 is similar to Fig. 10, but the indicator is shown flat instead of convex. 32, is the cover, 33, the backing and 34 the supporting filler. The filler in this case may be of cork, or similar material and glued therein.

The self-luminous material may be applied in various ways, for instance, directly to the inner face of the transparent shell or backing by coating the same thereon or in layers between the shell and backing.

What I claim and desire to secure by Letters-Patent of the United States, is the following, to-wit:—

1. An article of manufacture, having a layer of self-luminous material, a flanged, sheet-metal backing for the same, and a flexible, transparent, protective covering for the luminous material, the marginal edge of

said covering adapted to be positioned in the backing and be compressively held therein for retaining the elements in position.

2. A luminous, button-shaped indicator, comprising a backing and a flexible, transparent member adapted to be positioned with respect to said backing and be pressed in holding engagement therewith about its edges, and inclosing between said backing and member a self-luminous material, the underside of the device being substantially flat and provided with an adhesive for securing the indicator to an object to locate the same in the dark.

3. An indicator, having a layer of self-luminous material, a depressed backing the same, and a celluloid sheeting to cover and protect the luminous material, the marginal edge of said sheeting adapted to be held in binding engagement with the wall of the backing for sealing the luminous material, and said indicator provided with means whereby it may be stuck in position.

4. An indicator including a transparent shell, a layer of luminous material opposed to the inner side of said shell, a backing said luminous material, the shell being turned over the edge of said backing forming a housing for the luminous material, and adhesive means whereby the indicator may be secured in position.

In testimony that I claim the foregoing I have hereto set my hand in the presence of two witnesses, this 3 day of July, 1916.

MAXWELL C. FRANK.

Witnesses:

L. BEARDEN,
F. L. WOLFE.