Aug. 16, 1949. H. E. LONGBERG 2,479,500

ILLUMINATING MEANS

Filed Aug. 26, 1946

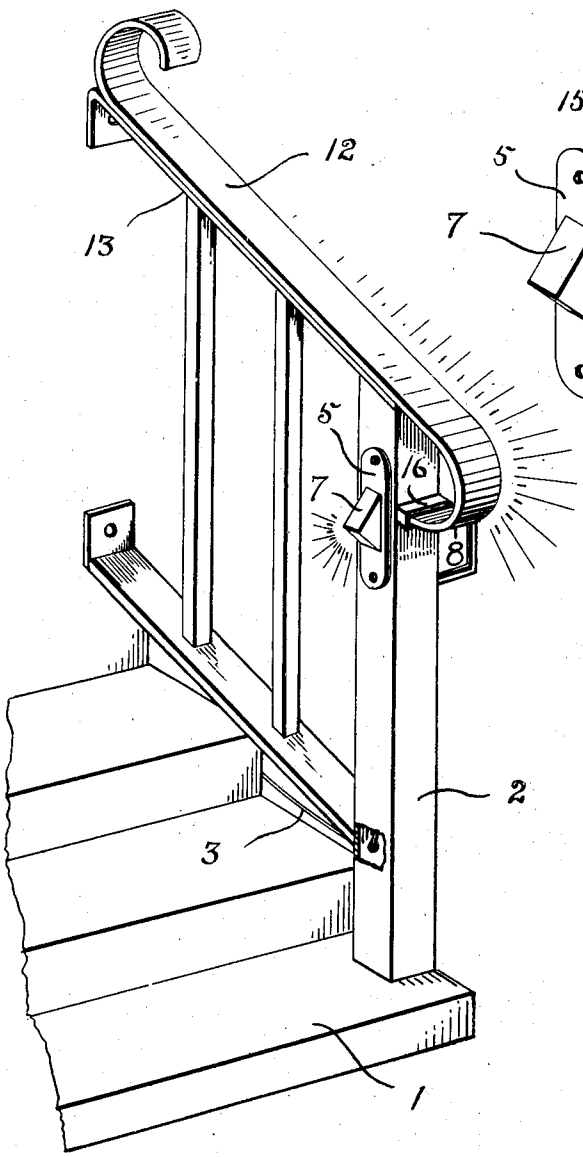


Fig. 1.

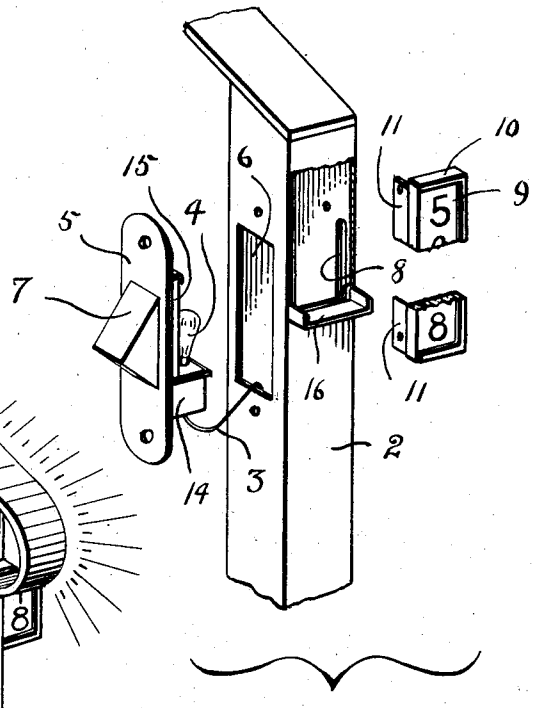


Fig. 2.

INVENTOR
Harry E. Longberg.
BY
Geo. Stevens.
ATTORNEY

Patented Aug. 16, 1949

2,479,500

# UNITED STATES PATENT OFFICE

2,479,500

## ILLUMINATING MEANS

Harry E. Longberg, Superior, Wis.

Application August 26, 1946, Serial No. 693,074

5 Claims. (Cl. 240—2)

1

This invention relates to illuminating means and has special reference to that type of such means particularly adapted to the illuminating of a stairway and adjacent handrail therefor and associate house number, name plate or the like.

The principal object is to accomplish such a lighting unit in a most simple and efficient manner and with the use of a minimum amount of electric current.

Another object is to employ the peculiar characteristic of some types of transparent plastic especially in relatively thick pieces, of carrying light rays entering one edge thereof through the body inwardly of said edge, together with the safety advantage of avoiding all danger and annoyance from a direct view of the light source.

Other objects and advantages will appear as the description of the invention continues.

Referring now to the accompanying drawing forming part of this application:

Fig. 1 is a perspective view of a stairway entrance to which the invention is applied.

Fig. 2 is a slightly enlarged exploded view of the newel post and its separable parts with the auxiliary plastic banister removed.

In the drawing, 1 represents the initial steps of an approach to an ordinary dwelling house where it is common to have some sort of illumination usually quite remote from such approach, for example, some adjacent wall of the house or possibly from the ceiling of the porch to which the approach may lead.

In the instant case, however, and deemed novel, the illumination occurs directly within the various associate objects adjacent the steps of the approach and directly upon the steps to be initially engaged by one approaching the honse in otherwise dusk or possibly darkness.

2 represents the newel post of such an approach and in this case is shown as hollow with an electric cord 3 leading to and upwardly within said post to the bulb 4 preferably mounted upon the removable cover member 5 for the innermost side opening 6 of the newel post. This cover 5 is provided with a suitable opening, not shown, through same for the transmission of light downwardly upon the steps directly below same, and for which purpose the angularly shaped visor 7 is fixed to the outer face of the cover 5 over the opening therein.

A narrow elongated opening 8 is made through the outer wall of the newel post 2 preferably opposite the front portion of the opening 6 in the inner wall and which narrow opening is for the transmission of light into the relatively thick

2

edge of the rectangularly shaped piece of plastic 9 carrying the house number or whatever indicia may be desired. As carrying means for the piece of plastic 9 I have shown a sheet metal box-like container 10 having a right angularly extending flange portion 11 through which suitable holes may be provided for attaching the holder 10 to the side of the newel post with the innermost edge of the plastic piece 9 covering the slot 8.

It is deemed obvious that the lettering or numbering on the plastic member may vary materially from that shown and yet function in making a clear display thereof by the light waves penetrating the plastic member.

As means for further illumination and identification of the entrance to the stairway or approach, there is shown the elongated S-shaped banister 12 of plastic attached in any desired manner to the supporting banister or rail 13 and having the lower end thereof extending within the rectangularly shaped socket 16 fixed to the front face of the newel post 2. This socket surrounds a suitable horizontally disposed opening to the interior of the newel post intermediate of the two openings 6 and 8, thus all luminous objects receive their light rays from the same source or bulb, 4.

It is well known that certain types of plastic have the property of transmitting light along their length, particularly if light rays are introduced in parallel relationship with the body of the plastic. In the instant employment of this property of plastic, it is contemplated that the light source 4 will be placed in spaced relationship to the end of the rail 12 which is intended to receive the light to be transmitted through the rail and that the source 4 will be placed so as to direct light rays into said rail 12 to be carried therealong.

A further characteristic of the invention is that the light receiving terminus of the banister 12 which extends within the socket 16 may be colored, and thus make possible the change of appearance of the banister.

Resting upon the box-like bracket 14 for holding the socket of the light bulb 4, I have shown a plate of diffusing glass for any desired control of the light projected upon the steps through the visor 7, said glass being indicated at 15.

Having thus described my invention, what I claim is:

1. A stairway approach comprising a hollow newel post, a fixed hand rail or banister associated therewith, an auxiliary hand rail or banister of transparent plastic mounted upon said fixed

rail and having its foremost terminus communicating with the interior of said post for transmitting light waves interiorly of said auxiliary rail toward the opposite end thereof, and a light source within said post adjacent the terminus of said auxiliary hand rail.

2. A structure as set forth in claim 1 further characterized by having independent means adjacent said light source for projecting a portion of said light waves upon steps of said stairway.

3. As a new article of manufacture, a device for lighting a stairway approach comprising, an upright hollow newel post, a light source within said post, said post having an opening in one side thereof adapted to receive said light source, a visor over said opening to direct light downwardly from said light source, said post having an opening in the front thereof adjacent said light source, and a translucent plastic hand rail carried with one end in said latter opening and its opposite end being bent upwardly and backwardly over said post, said rail being of such material as to conduct light rays from said source along the length thereof.

4. As a new article of manufacture, a device for lighting a stairway approach comprising, an upright hollow newel post, a light source within said post, a banister adjacent said post, an opening in one side of said post adapted to receive said light source, a visor over said opening to direct light rays from said light source, said post having an opening in an adjacent side thereof adjacent said light source, and a translucent plastic hand rail, said rail being carried with one end thereof in said last mentioned opening and its opposite end being carried on said banister, and



said rail being of such material as to conduct light rays from said source along the length thereof.

5. As a new article of manufacture, a device for lighting a stairway approach comprising an upright hollow newel post, a light source within said post, a banister adjacent said post, said post having an opening in the front thereof adjacent said light source, and a translucent hand rail having one end thereof installed within said opening to receive light from said light source, and the remainder thereof bent to engage said banister and be carried by the latter whereby light entering said rail will illuminate said banister.

HARRY E. LONGBERG.


## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 1,164,301 | Moore | Dec. 14, 1915 |
| 1,961,865 | Remington | June 5, 1934 |
| 2,082,724 | Shelor | June 1, 1937 |
| 2,227,861 | Petrone | Jan. 7, 1941 |
| 2,247,969 | Stewart | July 1, 1941 |
| 2,310,593 | Orlicki | Feb. 9, 1943 |
| 2,443,561 | Greenwald | June 15, 1948 |

FOREIGN PATENTS

| Number | Country | Date |
|---|---|---|
| 521,781 | Great Britain | 1940 |
| 816,795 | France | 1937 |