Nov. 25, 1924. 1,517,133

P. S. VAN BLOEM

SIGNAL FIXTURE

Filed Jan. 9, 1924

Fig. 1.

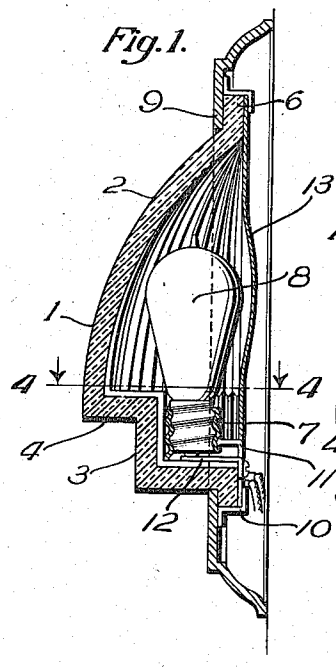


Fig. 2.

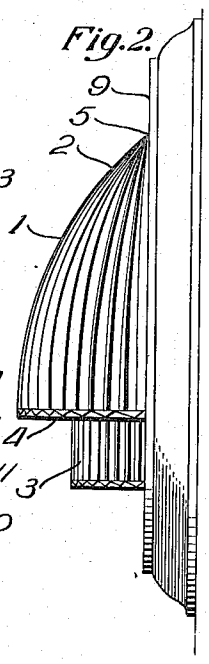


Fig. 3.

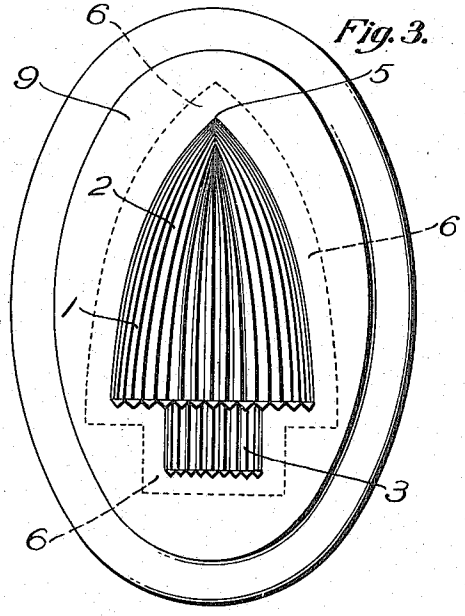


Fig. 4.

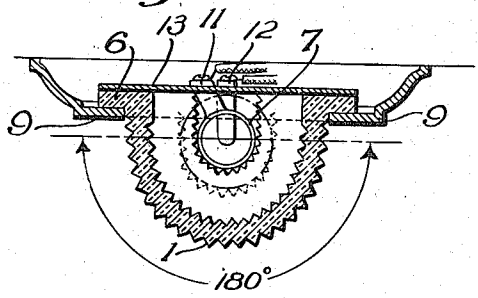


Fig. 5.

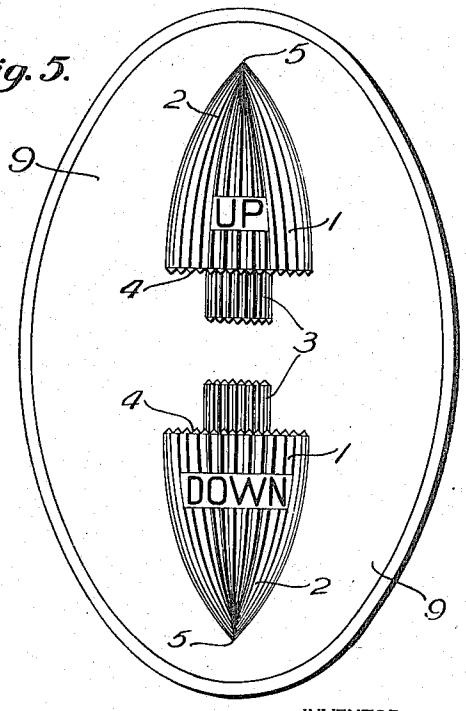
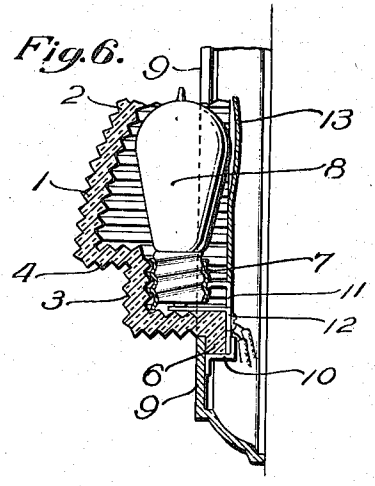


Fig. 6.



INVENTOR

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BY

ATTORNEYS

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UNITED STATES PATENT OFFICE.

PAUL SCHUYLER VAN BLOEM, OF HEMPSTEAD, NEW YORK, ASSIGNOR TO VIKING PRODUCTS CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

SIGNAL FIXTURE.

Application filed January 9, 1924. Serial No. 685,213.

To all whom it may concern:

Be it known that I, PAUL SCHUYLER VAN BLOEM, a citizen of the United States, and resident of Hempstead, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Signal Fixtures, of which the following is a specification.

The main object of the invention is to provide a signal fixture which because of its form will serve as a directional indicator. The invention is particularly well adapted for use as an up and down signal for elevators. It is also well adapted for use as a left and right indicator for traffic, and other similar uses.

The invention, as illustrated in the drawing, and as specifically described herein, consists in the use of a hollow transparent arrow, preferably of molded glass, in which is mounted a lighting element, preferably in the form of an electric lamp. This hollow arrow is arranged to project forwardly or outwardly through an opaque stencil plate, the arrow head being of such form that the center of the lighting lamp or element will be forward of the face or outer surface of the stencil plate. The purpose of this arrangement is to so locate the lighting element that the light rays therefrom will pass outwardly through the arrow head throughout an arc of 180°. The result of this arrangement is that the arrow head will be luminous when viewed from any angle, the light rays being thrown therefrom in all directions, within the arc of 180°.

Another object of the invention is to provide the projecting portion of the arrow head, both internally and externally with corrugations or angular ribs running in any desired direction to break up the light rays and divert them so that the projecting signal fixture will appear brilliantly illuminated when viewed within the 180° of light distribution.

Another object of the invention is to so contruct the arrow head that the lighting lamp may be wholly supported within it, the arrow head itself serving as a permanent support for the lamp socket.

Elevators in large buildings are usually arranged in banks or groups in a corridor. Frequently the elevators are arranged on opposite sides of the corridor. The up and down signals, which indicate the direction of travel of the elevator, are usually supported by means projecting beyond the wall of the corridor above the elevator doors. These signals as ordinarily arranged are automatically lighted through a contact device actuated by the movement of the elevator in the shaft, to indicate whether the elevator is traveling up or down. Signals of this type present many difficulties. They are difficult to understand instantaneously; require thought of interpretation of their meaning; are usually unsightly and are not, as a general rule, well adapted for the purpose of directing the waiting passenger to the oncoming elevators. This is due to the fact that they are not in themselves of such form as to impel the waiting passenger to move to the door of the oncoming elevator.

A signal fixture constructed in accordance with this invention may be secured flush, or substantially so, with the face of the support to which it is attached. This is so because the lighting element is adapted to be contained wholly, or substantially so, within the hollow arrow so that the opaque stencil plate may be arranged substantially flush with the surface on which the signal fixture is secured, the illuminated arrow being the only part of the fixture which projects beyond the outer face of the stencil plate. This adapts the invention especially for use as elevator directional signals. In this use of the invention the signal fixture is in the form of an arrow pointing in the direction of the travel of the elevator. The arrow indicating the up travel of the elevator will be automatically illuminated by the contact device on the car in its upward travel, while the arrow indicating the downward movement of the elevator will be automatically illuminated by the contact device in the downward travel of the car. Because of its shape the signal fixture of itself indicates instantly the direction of travel of the car and it is unnecessary to use any words of explanation such as "Up" and "Down."

In the drawing:

Fig. 1 is a vertical sectional view of a single signal fixture.

Fig. 2 a side elevation;

Fig. 3 a face view;

Fig. 4 a transverse sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 a face view of an up and down signal fixture; and

Fig. 6 a partial sectional view similar to Fig. 1 showing a slightly modified form of the fixture.

Referring to the parts by numerals 1 designates a hollow arrow head formed of transparent material, preferably of molded glass. The arrow head consists of a body portion 2 and a short stem or shaft portion 3. These parts are hollow and the stem or shaft portion 3 is connected to the body or base portion of the body by a cross wall 4. The arrow head is tapered from its base or cross wall portion to its point 5. Around the entire body of the arrow is formed a lateral supporting flange 6, the entire body of the arrow including the stem or shaft 3 projecting forwardly beyond the forward face of said flange. The stem 3 is hollow and in said stem is rigidly supported a threaded lamp socket 7, said socket being vertically arranged as shown in Fig. 1 and adapted to receive a lighting lamp 8. The lamp extends from the socket 7 up into the hollow body portion of the arrow, the center of said lamp socket being in front of and beyond the plane of the forward face of the flange 6, as clearly shown in Figs. 1 and 4. The lamp 8, when mounted in the socket 7, lies wholly within the hollow arrow head, or substantially so, as shown clearly in Figs. 1 and 4.

The molded glass arrow is adapted to be supported in an opaque stencil plate 9. This plate is cut out to accurately receive the arrow head, including the stem or shaft portion 3, as shown clearly in Figs. 1 and 3. The arrow head and stem portion extend forwardly through the stencil plate and the flange 6 bears against the inner side of said plate, as clearly shown in Fig. 1. Clips 10 are mounted on the inner side of the stencil plate and are bent down to engage the rear or inner surface of the flange 6 to lock the arrow head to the stencil plate. The stencil plate may form a portion of an ornamental plate adapted to be secured to a wall or other support. This ornamental plate is made comparatively flat, it being only necessary to have sufficient depth to receive the flange 6 of the arrow head. The wires of the lighting circuit are connected to the lamp socket through the contact 11 and to the center contact of the lamp through the contact plate 12.

If desired a reflector plate 13 may be secured across the rear or inner open side of the arrow head, as shown in Fig. 1, for the purpose of throwing the light rays outwardly through the arrow head.

The outer surface of the arrow head and the stem, as illustrated in Figs. 1 to 4 inclusive, is formed with longitudinally extending angular ribs, both internally and externally. The purpose of this is to break up and deflect the light rays so that the arrow will be brilliantly luminous when viewed from any angle. As shown clearly in Fig. 4 light rays will be thrown off from the arrow head through an arc slightly greater than 180°. It is clear therefore that the arrow head will appear luminous when viewed from any position within the 180° arc. It is also clear that the device will have the appearance of an arrow from all points of view within the said 180° of light distribution.

In Fig. 5 is illustrated a signal fixture in which two oppositely pointed arrows are arranged. This form of fixture is adapted for use as an up and down signal or indicator for elevators. The arrow pointing up is formed with the word "Up" therein, and the arrow pointing down is formed with the word "Down" molded therein. Each of these arrows are designed to be provided with a lighting element adapted to be operated by the usual contact devices carried by the elevator. The words "Up" and "Down" may be omitted from the arrow heads because the arrows themselves indicate the direction of travel of the elevator.

In Fig. 6 the molded arrow head is shown as provided with horizontal or transversely extending angular ribs for the purpose of breaking up and deflecting the light rays.

What I claim is:

1. A signal fixture comprising a hollow molded glass arrow head, an opaque stencil plate surrounding and supporting said arrow head in a vertical position, the arrow head projecting outwardly beyond the forward face of the stencil plate and being formed to taper from its base to its point both on a vertical sectional plane parallel to the stencil plate and on a vertical sectional plane perpendicular thereto, and an electric lamp mounted within the hollow portion of the arrow head and extending from the base toward the point of the arrow head.

2. A signal fixture comprising a hollow transparent arrow head, an opaque stencil plate surrounding and supporting said arrow head in a vertical position, the arrow head projecting outwardly beyond the forward face of the stencil plate and being formed to taper from its base to its point both on a vertical sectional plane parallel to the stencil plane and on a vertical sectional plane perpendicular thereto, and a lighting element supported within the rear hollow portion of the arrow head the longitudinal center of said lighting element being forward of the forward face of the stencil plate whereby the arrow head will appear luminous and the direction it is pointed will be evident from any point in front of the stencil plate within an arc of 180°.

3. A signal fixture comprising a hollow transparent arrow head, an opaque stencil plate surrounding and supporting said ar-

row head in a vertical position, the arrow head projecting outwardly beyond the front face of the stencil plate and being formed to taper from its base toward its point both on a vertical sectional plane parallel to the stencil plate and on a vertical sectional plane perpendicular thereto, a lighting element supported within the rear hollow portion of the arrow head said lighting element being forward of the front face of the stencil plate, and a reflector mounted at the rear of the arrow head and closing its hollow portion whereby the arrow head will appear luminous and the direction it is pointed will be evident from any point in front of the stencil plate within an arc of 180°.

4. A signal fixture comprising a hollow transparent arrow head having a hollow staff or stem portion, an opaque stencil plate cut out to accurately fit the arrow head and stem whereby the arrow head and stem may extend forwardly through said stencil plate and project beyond the forward or outer face thereof, a lamp socket mounted in the hollow stem portion, an electric lamp in said socket and extending up into the rear hollow portion of the arrow head, the longitudinal center of said lamp being forward of the face of the stencil plate.

5. A signal plate comprising a hollow plaque, said plaque being of a slight depth in comparison with its area and its front face being in the form of an opaque stencil plate, a hollow transparent arrow head surrounded and supported by said stencil plate in a vertical position said arrow head projecting outwardly from the front face of the stencil plate and being formed to taper from its base to its point on all vertical central sectional planes therethrough, and a lighting element supported within the rear hollow portion of the arrow head, the center of said lighting element being forward of the forward face of the stencil plate whereby the arrow head will appear luminous and the direction it is pointed will be clearly evident from any point within an arc of 180°.

6. A signal fixture comprising a hollow plaque, the said plaque being of slight depth in comparison with its area and its front face being in the form of an opaque stencil plate, a hollow molded glass arrow head fitted in and surrounded by said stencil plate, a laterally extending flange formed around the margin of the arrow head and adapted to bear against the inner surface of the stencil plate, means for clamping said flange to the stencil plate, the said arrow head being vertically disposed and projecting outwardly from the front face of the stencil plate and being formed to taper from its base to its point on all vertical central sectional planes, and an electric lamp mounted within the hollow rear portion of the arrow head, said lamp being mounted at the base of the arrow head extending toward the point thereof and having its center located forwardly of the front face of the stencil plate.

7. An elevator signal fixture comprising a hollow plaque of slight depth in comparison with its area, the front face of said plaque being in the form of an opaque stencil plate, a pair of hollow transparent arrow heads supported in stencil openings in said stencil plate and surrounded by the plate, said arrow heads being vertically disposed oppositely directed and in vertical alinement and each head projecting forwardly from the front face of the stencil plate and being formed to taper from its base to its point on all vertical central sectional planes, and a lighting element for each head, said lighting elements being mounted in the rear hollow portions of the arrow heads and having their centers located forward of the front face of the stencil plate.

In testimony whereof I hereunto affix my signature.

PAUL SCHUYLER VAN BLOEM.