United States Patent

Lund et al.

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[54] EXIT SIGN WITH ADJUSTABLE INDICIA

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[73] Assignee: **Markstone Manufacturing Company**

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[52] **U.S. Cl.** .....**40/132 D**, 40/65

[51] **Int. Cl.**.....**G09f 13/06**

[58] **Field of Search**.....40/63, 64, 65, 130, 132, 132 D, 40/133 B

[56] **References Cited**

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[57] **ABSTRACT**

A visual indicator, such as an exit sign, having a display panel which is a closure for the front of a housing containing a light source. The panel includes means for providing both a first transmitting visual image such as the word "Exit," and an area for a second light transmitting visual image such as an arrow. A mask-like means is mounted on the panel for movement between a plurality of positions, and has a plurality of visually different images which can be selectively registered with the second image area providing different second images. The panel and mask-like means have releasable means, accessible only when the panel is at least partially removed from the housing, to fix the mask-like means in each of the plurality of positions.

17 Claims, 8 Drawing Figures

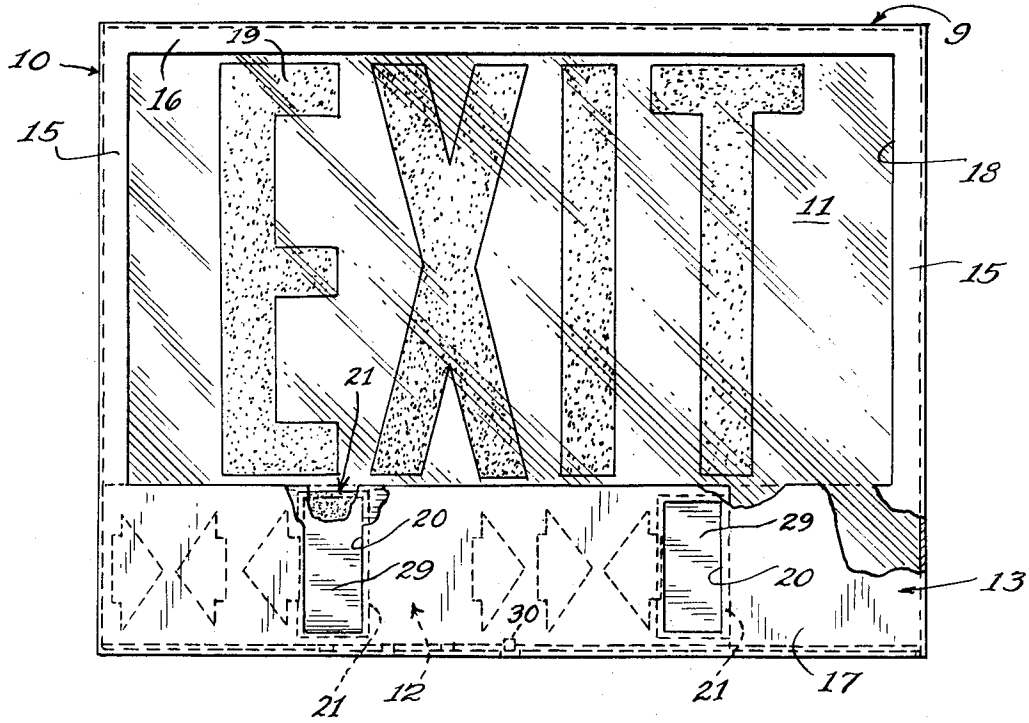


Fig. 1.

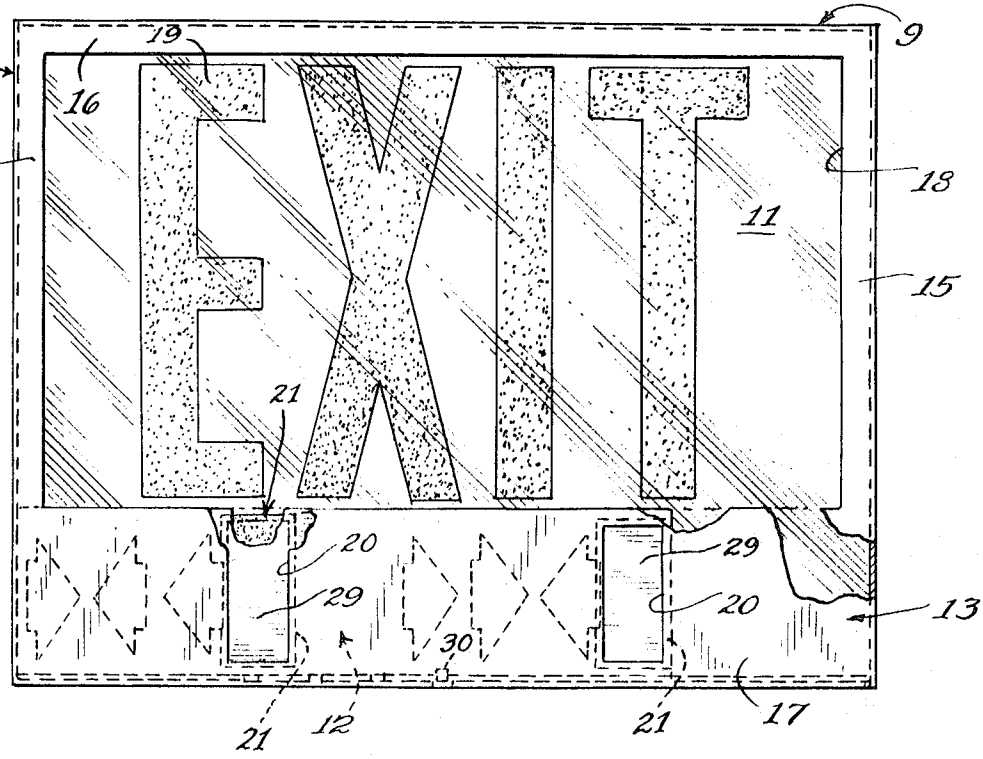


Fig. 2.

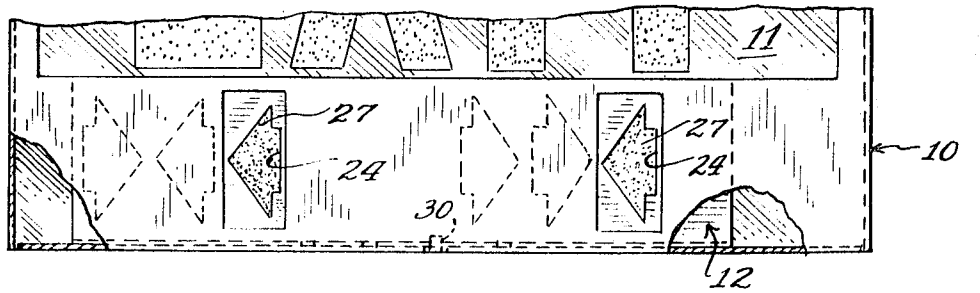


Fig. 3.

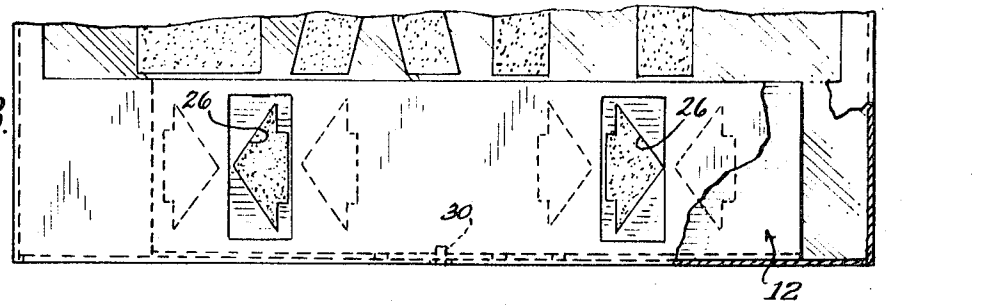
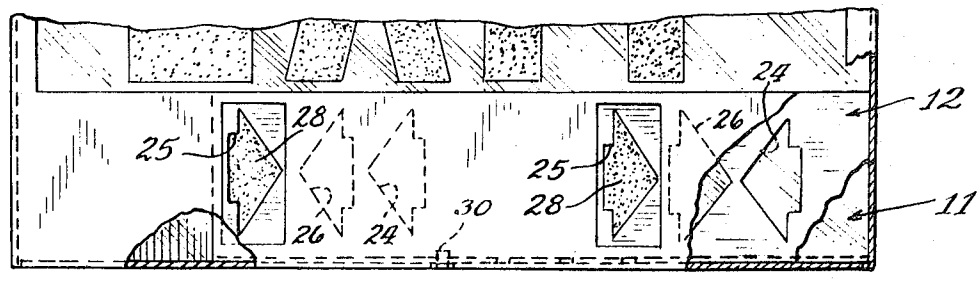


Fig. 4.



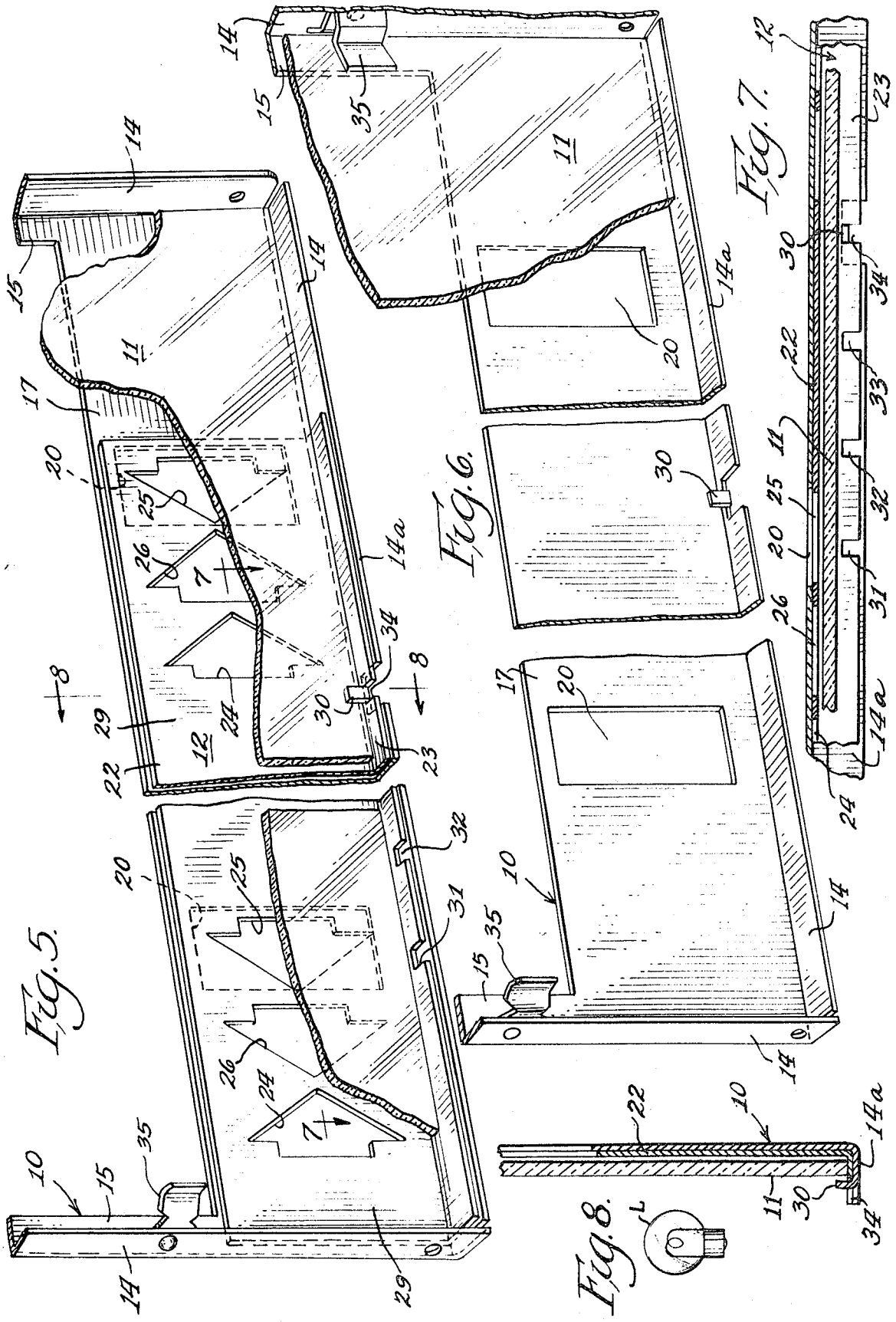


Fig. 5.
Fig. 6.
Fig. 7.
Fig. 8.

EXIT SIGN WITH ADJUSTABLE INDICIA

BACKGROUND OF THE INVENTION

Public buildings such as hotels, theaters, hospitals, office buildings, stores and transportation terminals are required by law to have readily visible illuminated signs to indicate the locations of exists. Some such signs are placed directly at an exit door, while others are in locations where they indicate the direction or directions of an exit or exits. Thus, there are four basic exit signs which may be required in any building—i.e., an exit at a doorway, an exit left, an exit right, and exit right and left.

The usual practice heretofore has been to provide exit signs in which the illuminated panel carrying the word "Exit" has no arrows on it, or an arrow pointing to the left or an arrow pointing to the right or arrows pointing in both directions. This, of course, requires a stock containing four different types of illuminated panels and selection of the required types for various locations.

An exit sign construction which can be used universally by adjusting indicia for forming arrows pointing to the left, to the right, or in both directions has been considered desirable; but the use of adjustable indicia has been accompanied by a risk that the indicia might be moved by an unauthorized person and thus cause the exit sign to give a false indication of direction. This, of course, could be disastrous in case of an emergency. As a result, adjustable exit signs have rarely been used.

SUMMARY OF THE INVENTION

The principal object of the present invention is to provide a new and improved visual indicator, as for an exit sign, having different visual images which can be selected by a tamper-proof adjustment.

The visual indicator of this invention has a display panel which is a closure for the open front of a housing containing a light source. The closure includes a frame which covers a front portion of the housing and a light transmitting plate which is releasably seated in the frame. The plate has a first visual image and a pair of second visual image areas which are related to the first. An adjustable mask-like means is located between the frame and the plate for movement between a plurality of positions. The mask-like means has a plurality of pairs of images with the images in each pair spaced apart by distance equal to the space between the second visual image areas so that each of the pairs can be simultaneously registered with the image areas in one of the plurality of positions. The image pairs include a first pair of identical images, a second pair of identical images which are different from the first pair, and a third pair of images of which one is identical with the images of the first pair and the other is identical with the images of the second pair. The mask-like means has a plurality of notches each of which is adapted to interengage with an upwardly directed tab on the frame to secure the mask-like means to the frame in one of the plurality of positions. The adjustment of the mask-like means can only be made when the panel is disassociated from the light source by at least partially removing it from the housing.

Another object of the invention is to provide an adjustable sign which is very simple, rugged, and inexpensive to make.

Another object of the invention is to provide for simple adjustment of the mask-like means when the panel is removed from the housing.

In one embodiment of the invention the visual indicator is an exit sign, the first visual image is the word EXIT, and the second visual images are different combinations of arrow pairs.

Thus, another object of the invention is that an exit sign is provided with different sets of arrows which can be selected by a tamper-proof adjustment, to permit mounting of the sign with a desired arrow configuration in any convenient location.

A further object of the invention is that provision is made to blank out the second visual image areas in one of the plurality of positions of the mask-like means to indicate an exit at the sign.

Further features will become more fully apparent in the following description of the embodiment of this invention and from the appended claims.

DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. **1** is a front elevational view, partly broken away, of one embodiment of the visual indicator made according to the present invention, with the mask-like means in position to blank out the second visual image areas;

FIG. **2** is a fragmentary front elevational view, partly broken away, with the mask-like means in position for a pair of left arrows to be registered in the second visual image areas;

FIG. **3** is a fragmentary elevational view, partly broken away, with the mask-like means in position for a left and a right arrow to be registered in the second visual image areas;

FIG. **4** is a fragmentary front elevational view, partly broken away, with the mask-like means in position for a pair of right arrows to be registered in the second visual image areas;

FIG. **5** is a fragmentary rear elevational view, on an enlarged scale, with the light transmitting plate partly broken away;

FIG. **6** is a fragmentary rear elevational view, on an enlarged scale, of the cover frame with the light transmitting plate partly broken away;

FIG. **7** is a fragmentary transverse sectional view, on an enlarged scale, taken substantially as indicated along the line **7**—**7** of FIG. **5**; and

FIG. **8** is a fragmentary vertical sectional view, on an enlarged scale, taken substantially as indicated along the line **8**—**8** of FIG. **5**, and with a light source illustrated diagrammatically.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in detail, and referring first to FIGS. **1** and **5** to **8**, the visual indicator of the present invention is illustrated as embodied in an exit sign, and is seen to consist of a display panel, indicated generally at **9**, with said panel including a rectangular frame, indicated generally at **10**, and a translucent glass plate, indicated generally at **11** which seats in the frame. A mask-like means, indicated generally at **12**, is positioned between the lower part of the frame **10** and the plate **11**.

The frame **10** is fabricated from a single piece of sheet metal which is punched, sheared and formed to provide a planar front plate, indicated generally at **13**, and a continuous peripheral flange **14** which surrounds the entire front plate and is perpendicular to it so as to permit the frame **10** to be mounted upon a housing for a light source (not shown). The frame front plate **13** has side borders **15**, a top border **16** and a lower web **17** the interior margins of which define a rectangular opening **18** through which most of the translucent plate **11**, bearing the word "Exit" in red letters, is visible to a person looking at the device from the front. The word "Exit" provides a first visual image **19**.

The lower web **17** of the frame front plate **13** is provided with a pair of spaced rectangular openings **20** which define areas for a second visual image, and the translucent plate **11** is provided with rectangular areas **21** which register with the openings **20** and are colored red.

As best seen in FIGS. **5**, **7** and **8**, the mask-like means **12** consists of a thin piece of sheet metal which is mounted between the lower web **17** of the frame front plate **13** and the contiguous portion of the translucent plate **11**. The mask-like means **12** includes a masking plate **22** which is sandwiched between the web **17** and the translucent plate, and a locking flange **23** which rests upon the lower frame flange **14***a* beneath the lower edge of the translucent plate **11**.

The masking plate **22** is provided with punched openings in the shape of arrows, there being a first pair of arrow-shaped openings **24** which point to the left when the device is viewed from the front (see FIG. **2**), a second pair of arrow-shaped openings **25** which point to the right (see FIG. **4**), and a third pair of arrow-shaped openings **26** of which one points to the left and the other to the right. The space between the arrow-shaped openings of each of the three pairs is equal to the space between the openings **20** in the lower frame web **17**, so that the mask-like means **12** may be positioned with any one of the three pairs of arrow-shaped openings in register with the openings **20** of the front plate. Thus, as seen in FIG. **2**, when the openings **24** are in register with the openings **20** they cooperate with the red rectangles **21** of the translucent plate **11** to provide a first pair of identical images **27** consisting of arrows pointing to the left. When the arrow-shaped openings **25** are aligned with the openings **20** they cooperate with the red rectangles **21** to provide a second set of visual images in the form of arrows **28** which point to the right. When the third set of arrow-shaped openings **26** is registered with the openings **20** they cooperate with the red rectangles **21** to provide a third pair of images in which one arrow points to the left and the other to the right.

The mask-like means **12** is of sufficient length, and the spacing between the openings **20** is such, that the mask-like means may be positioned with unbroken portions **29** registered with the openings **20** as seen in FIG. **1**, so as to blank out the red rectangles **21** and thereby blank out the second visual images.

The frame **10** and the mask-like means **12** are provided with releasable interengaging means for fixing the mask-like means selectively in the position of FIG. **1**, FIG. **2**, FIG. **3** or FIG. **4**. The releasable interengaging means comprises an upright tab **30** on the bottom flange **14***a* of the frame, and a series of notches **31**, **32**, **33** and **34** in the locking flange **23** of the mask-like means. The notches **31–34** are selectively engageable with the tab **30** to fix the mask-like means in the position of FIG. **1**, or of FIG. **2**, or of FIG. **3**, or of FIG. **4**. Since the mask plate **22** is between the frame front plate **13** and the translucent plate **11** the mask-like means may be moved from one position of adjustment to another only by disassembling the unit and then reassembling it. Thus, the device is effectively tamper-proof.

The three main elements of the device are preferably held in assembled relationship to one another by a set of deformable ears **35** which are riveted to the frame flange **14** in the outwardly projecting position seen in FIG. **5** and at the left-hand end of FIG. **6**, and the ears **35** may be manually bent to the retaining position illustrated at the right-hand end of FIG. **6**. The ears may conveniently be made of a soft aluminum alloy which has no tendency to return to the outwardly projecting position once it has been bent to the retaining position.

The foregoing detailed description is given for clearness of understanding only and no unnecessary limitations should be understood therefrom, as modifications will be obvious to those skilled in the art.

We claim:

1. A visual indicator for the front of a housing containing a light source, said indicator comprising, in combination:

a display panel, said panel including means providing a first light transmitting visual image and providing an area for a second light transmitting visual image which is related to the first, so that light from said source passes through said first image and through said area;

adjustable mask-like means mounted on the panel for movement between a plurality of positions, said mask-like means having a plurality of visually different light transmitting images which are selectively registrable with the second visual image area in different ones of said plurality of positions to provide different second visual images through which light from the source passes;

and releasable means located both on the panel and on the adjustable mask-like means which cooperate to lock said latter means in each of said plurality of positions, said releasable means and said adjustable mask-like means being accessible for the purpose of unlocking and adjusting said mask-like means and changing said second visual image only when the panel is disassociated from the light source.

2. The visual indicator of claim **1** in which the display panel is a closure for a housing which has an open front.

3. The visual indicator of claim **2** in which said closure includes a frame which covers the open front of said housing and a light transmitting plate releasably seated in said frame, and in which the mask-like means is of opaque material with the visually different images being defined by openings in the mask-like means.

4. A visual indicator of claim **3** in which the mask-like means is located between said frame and said light transmitting plate for movement between said plurality of positions.

5. The visual indicator of claim **4** in which said mask-like means comprises a single plate, and in which said releasable means comprises a projecting tab on said frame and a plurality of openings in said single plate, each of said openings being adapted to interengage with said tab to secure said single plate to said frame in one of said plurality of positions.

6. The visual indicator of claim **1** in which said panel has two spaced second visual image areas, and in which the mask-like means has a plurality of pairs of images with the images in each pair spaced apart by a distance equal to the space between the second visual image areas so as to be simultaneously registered with said areas, there being a first pair of identical images and a second pair of identical images which are different from said first pair, and each of said pairs being registered with the visual image areas in one of the plurality of positions of the mask-like means.

7. The visual indicator of claim **6** in which the mask-like means includes a third pair of images of which one is identical with the images of the first pair and the other is identical with the images of the second pair, and in which said third pair of images are registered with the visual image areas in one of the plurality of positions of the mask-like means.

8. The visual indicator of claim **7** in which the mask-like means is an opaque plate, and in which the plate has openings defining the pairs of images.

9. The visual indicator of claim **8** in which the releasable means is constructed and arranged to fix the mask-like means with no openings registered with the second image areas in one of the plurality of positions of the mask-like means, so as to blank out the second visual images in said one of said positions.

10. The visual indicator of claim **6** in which the mask-like means includes opaque areas, and in which the releasable means is constructed and arranged to fix the mask-like means with said opaque areas registered with the visual image areas to blank out the latter in one of the plurality of positions of the mask-like means.

11. The visual indicator of claim **6** which is an exit sign, the first visual image is the word EXIT, the first pair of identical images define arrows pointing to the left and the second pair of identical images define arrows pointing to the right.

12. The visual indicator of claim **11** in which the mask-like means includes a third pair of images with one image of said third pair defining an arrow pointing to the left and the second image of said third pair defining an arrow pointing to the right.

13. The visual indicator of claim **12** in which the mask-like means includes opaque areas, and in which the releasable means is constructed and arranged to fix the mask-like means with said opaque areas registered with the visual image areas to blank out the latter in one of the plurality of positions of the mask-like means.

14. The visual indicator of claim **1** which is an exit sign, the first visual image is the word EXIT, and the mask-like means has a first image which is an arrow pointing to the left and a second image which is an arrow pointing to the right.

15. The visual indicator of claim **14** in which the mask-like means has a third image which includes arrows pointing to the left and to the right.

16. The visual indicator of claim 15 in which the mask-like means includes an opaque area, and in which the releasable means is constructed and arranged to fix the mask-like means with said opaque area registered with the second visual image area to blank out the latter in one of the plurality of positions of the mask-like means.

17. The visual indicator of claim 1 in which the adjustable mask-like means comprises a plate, and in which the releasable means comprises a projecting tab on the display panel and a plurality of openings in the plate, each of said openings being adapted to interengage with said tab to secure said plate to said panel in one of said plurality of positions.

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