modesty panel located at an upper portion of the door apparatus.

However, in order to control the door apparatus of the elevator, sensors are installed in accordance with respective intended uses and objects in detection, as a result of which lines extended from the sensors require large space, and in addition are complicated. In this state, in the case where the camera is installed at an inner part of the modesty of the car, it needs to be accurately installed in a designed position and at a designed angle such that an area to be monitored is within the angle of view of the camera.

SUMMARY

According to one aspect, there is provided an elevator comprising: a modesty panel provided above a door apparatus of a car, and comprising a window portion configured to form an opening extending from an outer wall facing a hall to a bottom wall; a transparent member fitted in the window portion; a camera installed above the window portion and has a angle of view to shoot a range from an inside of the car to the hall, while the door apparatus is opened; a bracket fixing the camera such that a center line of the angle of view is inclined toward the hall; and a cover attached to an upper surface of the bottom wall of the modesty panel, and surrounding the window portion and at least a light receiving portion of the camera, wherein the transparent member is held between the outer wall of the modesty panel and the cover. Alternatively, the transparent member comprises a flange configured to engage with an edge of the window portion, and the cover comprises a lower edge configured to contact an upper edge of the flange contacting the outer wall from above.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross-sectional view illustrating an elevator according to a first embodiment.

FIG. 2 is a perspective view illustrating a camera at a modesty panel of a car of the elevator as illustrated in FIG. 1 and the vicinity of the camera, as seen from below.

FIG. 3 is an exploded perspective view illustrating the modesty panel and the camera as illustrated in FIG. 2.

FIG. 4 is a cross-sectional view of the camera and the modesty panel, which is taken along line F4-F4 in FIG. 2.

FIG. 5 is a cross-sectional view of the camera and the modesty panel, which is taken along line F5-F5 in FIG. 2.

FIG. 6 is a perspective view illustrating a camera installed at a modesty panel of an elevator according to a second embodiment and the vicinity of the camera.

FIG. 7 is an exploded perspective view illustrating the modesty panel and the camera as illustrated in FIG. 6.

FIG. 8 is a cross-sectional view of the camera and the modesty panel, which is taken along line F8-F8 in FIG. 6.

WHAT IS CLAIMED IS:

1. An elevator comprising:

a modesty panel provided above a door apparatus of a car, and comprising a window portion configured to form an opening extending from an outer wall facing a hall to a bottom wall;

a transparent member fitted in the window portion;

a camera installed above the window portion and has a angle of view to shoot a range from an inside of the car to the hall, while the door apparatus is opened;

a bracket fixing the camera such that a center line of the angle of view is inclined toward the hall; and

a cover attached to an upper surface of the bottom wall of the modesty panel, and surrounding the window portion and at least a light receiving portion of the camera, wherein

the transparent member is held between the outer wall of the modesty panel and the cover.

2. An elevator comprising:

a modesty panel provided above a door apparatus of a car, and comprising a window portion configured to form an opening extending from an outer wall facing a hall to a bottom wall;

a transparent member fitted in the window portion;

a camera installed above the window portion and has a angle of view to shoot a range from an inside of the car to the hall, while the door apparatus is opened;

a bracket fixing the camera such that a center line of the angle of view is inclined toward the hall; and

a cover attached to an upper surface of the bottom wall of the modesty panel, and surrounding the window portion and at least a light receiving portion of the camera, wherein

the transparent member comprises a flange configured to

engage with an edge of the window portion, and

the cover comprises a lower edge configured to contact an upper edge of the flange contacting the outer wall from above.

3. The elevator of Claim 2, wherein

the transparent member is held between the outer wall of the modesty panel and the cover.

4. The elevator of any one of Claims 1 to 3, wherein

the bracket is fixed to an inner wall of the modesty panel which faces an inside of the car.

5. The elevator of one of Claims 1 and 2, wherein

the cover is formed continuously with the bracket.