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(54) **OPERATING UNIT AND LANDING STAGE AND CAGE OF ELEVATOR COMPRISING IT**

BETRIEBSEINHEIT UND ETAGENPLATTFORM UND KABINE EINES AUFZUGS MIT BETRIEBSEINHEIT

BLOC DE FONCTIONNEMENT, ETAGE D'APPONTEMENT ET CABINE DE MONTE-CHARGE LE COMPRENANT

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(73) Proprietor: **MITSUBISHI DENKI KABUSHIKI KAISHA**
Chiyoda-ku
Tokyo 100-8310 (JP)

(72) Inventor: **MATSUDA, Kazuko,**
Mitsubishi Denki Kabushiki Kaisha
Chiyoda-ku, Tokyo 100-8310 (JP)

(74) Representative: **HOFFMANN EITLE**
Patent- und Rechtsanwälte
Arabellastraße 4
81925 München (DE)

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Description

TECHNICAL FIELD

[0001] The invention relates to an operating device, an elevator hall device equipped with the operating device, and a passenger car equipped with the operating device. In particular, the invention relates to an operating device having operation buttons to be used for controlling a passenger car of an elevator system, an elevator hall device equipped with the operating device, and a passenger car equipped with the operating device.

BACKGROUND ART

[0002] There has hitherto been known an operating device (hall appliance) of an elevator hall apparatus, wherein a face plate having operating buttons (call buttons) is removably attached to a case embedded in an area on a wall in the vicinity of an elevator hall.

[0003] More specifically, a technique for fastening a face plate to a case embedded in a wall section with screws by way of a mount plate is described in, e.g., Japanese Utility Model Application Laid-Open No. 6359/1994. Further, a technique for providing a case embedded in a wall section with stationary pins and providing a face plate with leaf springs which are to be engaged with the stationary pins is described in, e.g., Japanese Utility Model Application No. 89372/1993.

[0004] JP 11-092044 A discloses an operation panel for an elevator, where the cover is prevented from being opened and closed by an unauthorized person by means of a magnetic locking mechanism involving a slide member to be moved by a magnet. The magnet is supposed to be slid on the outer cover, thereby moving the slide member, thus allowing the cover to be removed.

[0005] An operating device whose face plate is formed so as to be removably attached to a case enables easy maintenance and inspection of the operating device. Specifically, operating buttons or display sections are provided on the face plate of the operating device so as to project from the rear to the front thereof. Operating buttons provided on the rear of the face plate and an electrical component section of the display section are usually housed in the case. When maintenance and inspection of those operating buttons or the electrical component section of the display section are required, the face plate is removed from the case, thereby enabling operation.

[0006] Development of an elevator system which does not have any machine room has recently been pursued, with an aim towards space savings. Appliances for maintenance and adjustment purposes which have hitherto been placed in an elevator machine room are increasingly housed in the case. Therefore, removal of the face plate may be required on occasions other than maintenance and inspection of operating buttons or the like provided on the face plate.

[0007] However, the related-art technique encounters a first problem of a third party other than service engineers who actually perform maintenance and inspection operation being able to readily remove a face plate from the case. In the worst case, a malicious third party removes a face plate, thereby breaking electrical components housed in the case.

[0008] The above-described problem also applies to an operating device disposed in a passenger car of an elevator system other than to an operating device disposed in an elevator hall apparatus to be used for entering and exiting a passenger car which is caused to ascend or descend within a hoistway.

[0009] The invention has been conceived to solve the problem and aims at providing an operating device which prohibits a third party other than a service engineer who performs maintenance and inspection from removing a face plate.

DISCLOSURE OF THE INVENTION

[0010] This is achieved by the subject matter of claim 1

[0011] According to the invention, a lock whose lock operation section is projected from a rear surface of a face plate to a front surface of the same is fitted to a fitting section formed in a case by means of operation of the lock operation section. As a result , a third party other than a service engineer capable of operating the lock operation section cannot remove a face plate from a case of the operating device. Thus, the operating device can prohibit a malicious third party from causing failures.

[0012] The invention is directed toward the thus-improved operating device which further comprises an auxiliary fitting section for fitting the face plate to the case. As a result, the operating device enables fitting of the face plate to the case in a well-balanced manner, along with the fitting section, by use of a single key.

[0013] According to the invention, an auxiliary fitting section of the thus-improved operating device is formed from a mount plate having an upright section and a fitting plate having another upright section to fit to the upright section. As a result, the operating device enables fitting of the face plate to the case in a well-balanced manner by way of a comparatively simple construction.

[0014] According to the invention, the upright section provided on the mount plate is placed in an inclined upright position. As a result, the operating device enables smooth removal of the face plate from the case.

[0015] The invention is further directed toward the operating device, wherein the operating device is provided on an elevator hall apparatus. As a result, the operating device can prevent a malicious third party other than the service engineer from removing the face plate; prevent infliction of damage to a wire, which would otherwise be caused by a service engineer at the time of maintenance and inspection; and prevent occurrence of failures in components, such as an electrical component section housed in the case.

[0016] The invention is also directed toward the operating device, wherein the operating device is provided on a passenger car of an elevator system. As a result, the operating device can prevent occurrence of failures, which would otherwise be caused when a malicious third party other than a service engineer removes a face plate; prevent damage to a wire, which would otherwise be caused by a service engineer at the time of maintenance and inspection; and prevent occurrence of failures in components, such as an electrical component section, housed in the case.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017]

Fig. 1 is a schematic front view of a preferred operating device of the invention;

Fig. 2 is a schematic cross-sectional view of the operating device taken along line X1-X1 shown in Fig. 1;

Fig. 3 is a schematic cross-sectional view of the operating device taken along line Y1-Y1 shown in Fig. 2;

Fig. 4 is a schematic cross-sectional view of the operating device taken along line Z1-Z1 shown in Fig. 2;

Fig. 5 is a schematic cross-sectional view showing that the operating device shown in Fig. 2 has deactivated a lock;

Fig. 6 is a schematic cross-sectional view showing processes during which a face plate is removed from the operating device shown in Fig. 2;

Fig. 7 is a schematic cross-sectional view showing a state in which removal of the face plate from the case of the operating device shown in Fig. 2 has been completed;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0018] In order to describe the invention in more detail, the invention will be described by reference to the accompanying drawings. Herein, identical or corresponding elements are assigned the same reference numerals, and their repeated explanations are simplified or omitted, as required.

[0019] The configuration of an operating device according to an embodiment of the invention will be described by reference to Figs. 1 through 4.

[0020] Fig. 1 is a schematic front view showing an operating device of the embodiment. Specifically, Fig. 1 is a view showing a surface of a face plate of the operating device. In the drawing, reference numeral 1 designates a face plate which seals an opening section of a case; 2c designates a keyway section which serves as a lock operation section into which a service engineer inserts a key at the time of inspection and maintenance; 20 designates a display section for informing passengers standing in a hall of a traveling status of a passenger car; and 21 designates an operation button (call button) for causing the passenger car to stop at an elevator hall and to ascend or descend in a desired direction.

[0021] Fig. 2 is schematic cross-sectional view of the operating device taken along line X1-X1 shown in Fig. 1. In the drawing, reference numeral la designates a front surface of the face plate 1 serving as a surface which is to be operated by passengers; 1b designates a rear surface of the face plate 1 opposing the case; 2 designates a lock having the keyway 2c projecting from the rear surface 1b toward the front surface 1a; 2a designates a latch section of the lock 2 which can move so as to fit to a fitting section by means of actuation of a key inserted into the keyway 2c; 3 designates a fitting plate which is provided on an upper end of the face plate 1 and has an upright section 3a standing upright so as to face the upper end; 4a designates a bolt for holding the fitting plate 3 onto the rear surface 1b of the face plate 1; 4b designates a bolt for retaining a mount plate onto an upper end section of a case 6; 4c designates a bolt for retaining operation buttons 21 on the face plate 1; 5a designates a nut which fits onto the bolt 4a and retains the fitting plate 3 on the face plate 1; 5b designates a nut which fits onto the bolt 4b and retains the mount plate to a case 6; 5c designates a nut which fits onto the bolt 4c and retains the operation buttons 21 on the face plate 1; 6 designates a case which has opening sections and is embedded into a wall section located in the vicinity of an elevator hall; 6b designates an upper end of the case 6; 6c designates a lower end of the case 6; 7 designates a mount plate which is provided at the upper end 6b of the case 6 and has an upright section 7a standing upright so as to face the lower end 6c; 8 designates a fitting section which is provided on the lower end 6c of the case 6 and fits on the lock 2; 8a designates a fitting hole of a fitting section 8 into which the latch section 2a of the lock 2 fits ; 20a designates an electrical component section of the display section 20 housed in the case 6; and 21a designates an electrical component section for the operation buttons 21 housed in the case.

[0022] As mentioned previously, the lock 2 and the fitting section 8 fit together at the lower end 6c which serves as a longitudinal end of the case 6. In contrast, the fitting plate 3 serving as an auxiliary fitting section and the mount plate 7 fit together at the upper end 6b serving as the other longitudinal end of the case 6. The bolt 4a penetrates through the fitting plate 3, and the bolt 4c penetrates through the electrical component section 21a. The bolts are fastened into female screw sections (blind sections) formed in the rear surface 1b of the face plate 1. The bolt 4b penetrates through the mount plate 7 and is fastened to a female section provided in the upper end 6b of the case 6.

[0023] Fig. 3 is a schematic cross-sectional view of the operating device taken along line Y1-Y1 shown in Fig. 2. Specifically, Fig. 3 is a view showing the rear surface 1b of the face plate 1 of the operating device of the first

embodiment. In the drawing, reference numeral 4d designates a bolt which penetrates through the electrical component section 20a for retaining the face plate 1 to the face plate 1 and is fastened to a female section (blind section) of the rear surface 1b; 4f designates a bolt which penetrates through a main body section of the lock 2 for retaining the lock 2 to the face plate 1 and is fastened to a female section (blind section) of the rear surface 1b; 5d designates a nut fitting onto the bolt 4d; and 5f designates a nut which fits onto the bolt 4f.

[0024] Fig. 4 is a schematic cross-sectional view of the operating device taken along line Z1-Z1 shown in Fig. 2. Specifically, Fig. 4 is a front view showing the inside of the case 6 of the operating device according to the first embodiment. In the drawing, 4g designates a bolt which penetrates through a retaining plate for retaining the fitting section 8 on the lower end 6c and is fastened to the female section of the case 6; 5g designates a nut fitting onto the bolt 4g; 6a designates a through hole for wiring purpose provided in the rear surface of the case 6 ; 6d designates a rear surface of the case 6; and 8b designates a retaining plate of the fitting section 8.

[0025] The retaining plate 8b of the fitting section 8 shown in Fig. 4 is omitted from Fig. 2, and is disposed so as to come into contact with the lock 2. As a result, the vertical (longitudinal) position of the face plate 1 relative to the case 6 is substantially determined. As shown in Fig. 3, the horizontal length of the fitting plate 3 is determined so as to become slightly shorter than the horizontal (lateral) length of the inside of the case 6, thereby substantially determining the horizontal position of the face plate 1 with respect to the case 6.

[0026] As shown in Fig. 2, in the operating device having the foregoing configuration, the face plate 1 seals an opening section of the case 6 by means of the lock 2 fitting to the fitting section 8 and the fitting plate 3 serving as an auxiliary fitting section fitting to the mount plate 7. The operating device of the elevator hall apparatus is disposed such that the face plate 1 is provided along the surface of a wall section of a building located in the vicinity of the elevator hall (or an entrance door). As shown in Fig. 1, a passenger operates an operation button 21 of the plate 1 exposed on the wall section, thereby causing a passenger car of the elevator system- into which the passenger desires to enter- to ascend or descend.

[0027] The operation of the operating device having the foregoing configuration which is performed at the time of maintenance and inspection of the operating device will now be described by reference to Figs. 5 through 7. Figs. 5 through 7 are schematic cross-sectional views showing the operating device from a state in which the face plate 1 fits to the case 6 (i.e., the status shown in Fig. 2) until a state in which the face plate 1 is removed from the case 6.

[0028] When performing maintenance and inspection of the operating device, a service engineer inserts a key 2b into the keyway 2c of the lock 2. As shown in Fig. 5, the latch section 2a of the lock 2 is released from the fitting hole 8a of the fitting section 8 when the key 2b is rotated in a predetermined direction. Specifically, the lock 2 is disengaged from the fitting section 8, thereby rendering the face plate 1 removable from the case 6. In Fig. 5, reference numeral 14 designates a wall section located in the vicinity of an elevator hall of the elevator hall apparatus; and 14a designates a surface (i.e., an exposed surface located in a building) of the wall section 14.

[0029] As shown in Fig. 6, the face plate 1 that has become removable is withdrawn in a direction indicated by an arrow in the drawing. Here, the fitting plate 3 serving as an auxiliary fitting section remains fitted with the mount plate 7 at the upper end of the face plate 1 and that of the case 6. Hence, a limitation is imposed on removal of the upper end of the face plate 1. In other words, the face plate 1 is removed while being rotated about an upper end thereof. The standup section 7a of the mount plate 7 to be disposed on the case 6 is formed so as to stand upright while being inclined toward the lower end 6c in accordance with rotative removal of the face plate 1. Specifically, the upright section 7a of the mount plate 7 stands upright so as to face the opening section of the case 6. Therefore, when the face plate 1 is removed, the upright section 7a of the mount plate 7 does not interfere with the upright section 3a of the fitting plate 3, and not to hinder movement of the face plate 1.

[0030] Finally, the face plate 1 is withdrawn to a position where the fitting between the fitting plate 3 and the mount plate 7 is able to released. As shown in Fig. 7, the face plate 1 is moved in a direction indicated by an arrow in the drawing. As a result, removal of the face plate 1 from the case 6 of the operating device is completed.

[0031] Procedures for removal of the face plate 1 from the case 6 of the operating device 1 have been described by reference to Figs . 5 through 7. Attachment of the face plate 1 to the case 6 is achieved by reversing the procedures described above.

[0032] As has been described, according to the operating device of the embodiment, only a service engineer who needs to remove the face plate 1 possesses a key matching the lock 2. Hence, third parties other than a service engineer cannot attach or remove the face plate 1. Consequently, a malicious third party can be reliably prohibited from touching the inside of the operating section.

[0033] In the embodiment, the invention has been applied to an operating device to be placed in an elevator hall apparatus. However, the invention is not limited to this embodiment; the invention can also be applied to an operating device to be installed in a passenger car of an elevator system or to an operating device to be used for controlling a machine other than the passenger car.

[0034] In the embodiment, an exposed keyway is provided as a lock operation section on the surface 1a of the face plate 1. However, the lock operation section is not limited to the keyway; various forms of key operation sections, such as a key operation section which enables entry of a password, can also be applied to the lock op-

eration section. Similarly, various forms, such a hook-shaped form, can also be applied to the latch section 2a of the lock 2.

[0035] In the embodiment, the lock 2 and the fitting section 8 are disposed at the lower end of the operating device, and the auxiliary fitting section is provided at the upper end of the operating device. However, they may be inverted; namely, the lock 2 and the fitting section 8 may be provided at the upper end of the operating device, and the auxiliary fitting section may be provided at the lower end of the operating device. Further, they may be disposed on either side of the operating device.

[0036] In the embodiment, the lock 2 and the fitting section 8 are disposed at the lower end of the operating device, and the auxiliary fitting section is disposed at the upper end of the same. In contrast, a plurality of locks 2 can be disposed on the operating device. Specifically, the lock 2 and the fitting section 8 can be disposed at respective upper and lower ends of the operating device, and even such an arrangement yields the same advantage as that of the embodiment.

[0037] As is obvious, the present invention is not limited to the embodiment, and the embodiment is susceptible to modifications falling within the technical scope of the present invention as defined by the appended claims. The constituent elements are not limited to those described in connection with the embodiment in terms of number, position, and shape. The constituent elements may be embodied in number, position, and shape preferable for implementing the present invention.

INDUSTRIAL APPLICABILITY

[0038] As has been described, in an operating device according to the invention, a lock whose lock operation section is projected from a rear surface of a face plate to a front surface of the same is fitted to a fitting section formed in a case, by means of operation of the lock operation section. As a result, a third party other than a service engineer capable of operating the lock operation section cannot remove a face plate from a case of the operating device. Thus, the operating device is useful as a device capable of prohibiting a malicious third party from causing failures.

[0039] The operating device of the invention further comprises an auxiliary fitting section for fitting the face plate to the case. As a result, the operating device is useful as a device capable of fitting the face plate to the case in a well-balanced manner, along with the fitting section, by use of a single key.

[0040] In the operating device of the invention, an auxiliary fitting section is formed from a mount plate having an upright section and a fitting plate having another upright section to fit to the upright section. As a result, the operating device is useful as a device capable of fitting the face plate to the case in a well-balanced manner by use of a comparatively simple construction.

[0041] In the operating device of the invention, the upright section provided on the mount plate is placed in an inclined upright position. As a result, the operating device is useful as a device which enables smooth removal of the face plate from the case.

[0042] In the operating device of the invention, the operating device is provided on an elevator hall apparatus. As a result, the operating device is useful as an elevator hall apparatus capable of preventing a malicious third party other than the service engineer from removing the face plate; preventing infliction of damage to a wire, which would otherwise be caused by a service engineer at the time of maintenance and inspection; and occurrence of failures in components, such as an electrical component section housed in the case.

[0043] In the operating device of the invention, the operating device is provided on a passenger car of an elevator system. As a result, the operating device is useful as a device capable of preventing occurrence of failures, which would otherwise be caused when a malicious third party other than a service engineer removes a face plate; capable of preventing infliction of damage to a wire, which would otherwise be caused by a service engineer at the time of maintenance and inspection; and capable of preventing occurrence of failures in components, such as an electrical component section, housed in the case.

Claims

1. An operating device including
   a case (6) having an opening section; and
   a face plate (1) which has operation buttons (21) projecting from a rear surface (1b) to a front surface (1a) and is to be removably disposed on the case (6) so as to seal the opening section while the rear surface (1b) is oriented toward the case (6), wherein the face plate (1) has a lock (2) which is operable by use of a single key (2b) and whose lock operation section (2c) projects from the rear surface (1b) to the front surface (1a),
   the caste (6) has a fitting section (8) comprising a fitting hole (8a) to fit a lacth section (2a) of the lock (2) of the face plate (1) by rotating the key (2b) inserted into the lock operation section (2c) in a predetermined direction, and
   the face plate (1) and the case (6) have an auxiliary fitting section (3, 7) to be used for fitting the face plate (1) and the case (6) together, in addition to the lock (2) and the fitting section (8).

2. The operating device according to claim 1, wherein the auxiliary fitting section (3, 7) comprises a mount plate (7) which has upright section (7a) provided at one longitudinal end of the case (6) and standing upright toward the other longitudinal end, and fitting plate (3) which has an upright section (3a) standing upright toward the one longitudinal end, the fitting plate (3) is to be disposed at one longitudinal end of

the face plate (1) and to fit the mount plate (7);
the lock (2) is placed at the other longitudinal end of the face plate (1); and
the fitting section (8) is placed at the other longitudinal end of the case (6).

3. The operating device according to claim 2, wherein the upright section (7a) of the mount plate (7) stands while remaining inclined toward the other longitudinal end in association with removal and attachment of the face plate (1) from and to the case (6).

4. An elevator hall apparatus comprising:

an operating device as defined in any one of claims 1 through 3 which is placed at a position on a wall section in the vicinity of a hall, wherein a passenger car of an elevator system into which a passenger desires to enter is caused to ascend or descend by operation of the operation buttons (21) at the hall.

5. A passenger car of an elevator system in which an operating device as defined in any one of claims 1 through 4 is placed, wherein the passenger car into which a passenger enters is caused to ascend or descend by operation of the operation button (21) within the passenger car.

Patentansprüche

1. Betätigungseinrichtung mit
einem Gehäuse (6) mit einem Öffnungsabschnitt; und einer Vorderplatte (11), die Betätigungsknöpfe (21) aufweist, die sich von einer Rückoberfläche (1b) zu einer Vorderoberfläche (1a) erstrecken, und die entfernbar an dem Gehäuse (6) vorgesehen ist, um den Öffnungsabschnitt abzudichten wenn die Rückoberfläche (1b) zu dem Gehäuse (6) gerichtet ist, wobei
die Vorderplatte (1) ein Schloss (2) aufweist, das unter Benutzung eines einzelnen Schlüssels (2b) betätigbar ist und dessen Schlossbetätigungsabschnitt (2c) von der Rückoberfläche (1b) zu der Vorderoberfläche (1a) hervorragt,
das Gehäuse (6) einen Befestigungsabschnitt (8) mit einem Befestigungsloch (8a) aufweist, um daran einen Klinkenabschnitt (2a) des Schlosses (2) der Vorderplatte (1) durch Drehen des Schlüssels (2b), der in den Schlossbetätigungsabschnitt (2c) eingeführt ist, in eine vorher festgelegte Richtung zu befestigen, und
die Vorderplatte (1) und das Gehäuse (6) zusätzlich zu dem Schloss (2) und dem Befestigungsabschnitt (8) einen Hilfsbefestigungsabschnitt (3, 7) aufweisen, um die Vorderplatte (1) und das Gehäuse (6) aneinander zu befestigen.

2. Betätigungseinrichtung nach Anspruch 1, bei welcher der Hilfsbefestigungsabschnitt (3, 7) eine Anbringplatte (7) aufweist, die einen vertikalen Abschnitt (7a) an einem Längsende des Gehäuses (6) aufweist, der vertikal zu dem anderen Längsende hin steht, und wobei die Befestigungsplatte (3) einen vertikalen Abschnitt (3a) aufweist, der vertikal zu dem einen Längsende hin steht, wobei die Befestigungsplatte (3) an einem Längsende der Vorderplatte (1) vorzusehen und an der Anbringplatte (7) zu befestigen ist;
wobei das Schloss (2) am anderen Längsende der Vorderplatte (1) angeordnet ist; und
der Befestigungsabschnitt (8) am anderen Längsende des Gehäuses (6) angeordnet ist.

3. Betätigungseinrichtung nach Anspruch 2, bei welcher der vertikale Abschnitt (7a) der Anbringplatte (7) steht während er zu dem anderen Längsende hin in Zusammenhang mit dem Entfernen und Verbinden der Vorderplatte (1) von und an dem Gehäuse (6) geneigt bleibt.

4. Aufzugshallenvorrichtung mit:

einer Betätigungseinrichtung nach einem der Ansprüche 1 bis 3, die an einer Position an einem Wandabschnitt in der Nähe einer Halle angeordnet ist, bei der
eine Passagierkabine eines Aufzugssystems, in die ein Passagier eintreten will, durch Betätigen der Betätigungsknöpfe (21) in der Halle dazu gebracht wird, sich nach oben oder nach unten zu bewegen.

5. Passagierkabine eines Aufzugssystems, in der eine Betätigungseinrichtung nach einem der Ansprüche 1 bis 4 angeordnet ist, bei der die Passagierkabine, in die ein Passagier eintritt, durch Betätigen des Betätigungsknopfs (21) in der Passagierkabine dazu gebracht wird, sich nach oben oder nach unten zu bewegen.

Revendications

1. Dispositif de manoeuvre incluant
un boîtier (6) comportant une section d'ouverture ; et une plaque de façade (1) qui comporte des boutons d'actionnement (21) faisant saillie depuis une surface arrière (1b) vers une surface avant (1a) et qui doit être disposée de façon amovible sur le boîtier (6) de manière à sceller la section d'ouverture tandis que la surface arrière (1b) est orientée vers le boîtier (6), dans lequel
la plaque de façade (1) comporte une serrure (2) qui est utilisable à l'aide d'une seule clé (2b) et dont la section d'actionnement de serrure (2c) fait saillie de-

puis la surface arrière (1b) vers la surface avant (1a), le boîtier (6) comporte une section d'insertion (8) comprenant un trou d'insertion (8a) afin d'insérer une section de verrou (2a) de la serrure (2) de la plaque de façade (1) en tournant la clé (2b) introduite dans la section d'actionnement de serrure (2c) dans un sens prédéterminé, et
la plaque de façade (1) et le boîtier (6) comportent une section de montage auxiliaire (3 ; 7) à utiliser pour ajuster la plaque de façade (1) et le boîtier (6) ensemble, en plus de la serrure (2) et de la section d'insertion (8).

2. Dispositif de manoeuvre selon la revendication 1, dans lequel la section de montage auxiliaire (3, 7) comprend une plaque de montage (7) qui comporte une section verticale (7a) prévue au niveau d'une extrémité longitudinale du boîtier (6) et se tenant dressée vers l'autre extrémité longitudinale, et une plaque de fixation (3) qui comporte une section verticale (3a) se tenant dressée vers la première extrémité longitudinale, la plaque de fixation (3) devant être disposée au niveau d'une extrémité longitudinale de la plaque de façade (1) et devant s'ajuster sur la plaque de montage (7) ;
la serrure (2) est placée au niveau de l'autre extrémité longitudinale de la plaque de façade (1) ; et
la section d'insertion (8) est placée au niveau de l'autre extrémité longitudinale du boîtier (6).

3. Dispositif de manoeuvre selon la revendication 2, dans lequel la section verticale (7a) de la plaque de montage (7) se tient dressée tout en restant inclinée vers l'autre extrémité longitudinale en association avec le retrait et l'arrimage de la plaque de façade (1) du et sur le boîtier (6).

4. Appareil de palier d'ascenseur comprenant
un dispositif de manoeuvre tel que défini dans l'une quelconque des revendications 1 à 3, qui est placé à une position sur une section de paroi à proximité d'un palier, dans lequel
une cabine d'usager d'un système d'ascenseur dans laquelle un usager souhaite entrer est amenée à monter ou descendre par l'actionnement des boutons d'actionnement (21) au niveau du palier.

5. Cabine d'usager d'un système d'ascenseur dans laquelle est placé un dispositif de manoeuvre tel que défini par l'une quelconque des revendications 1 à 4, où la cabine d'usager dans laquelle un usager entre est amené à monter ou descendre par l'actionnement du bouton d'actionnement (21) dans la cabine d'usager.

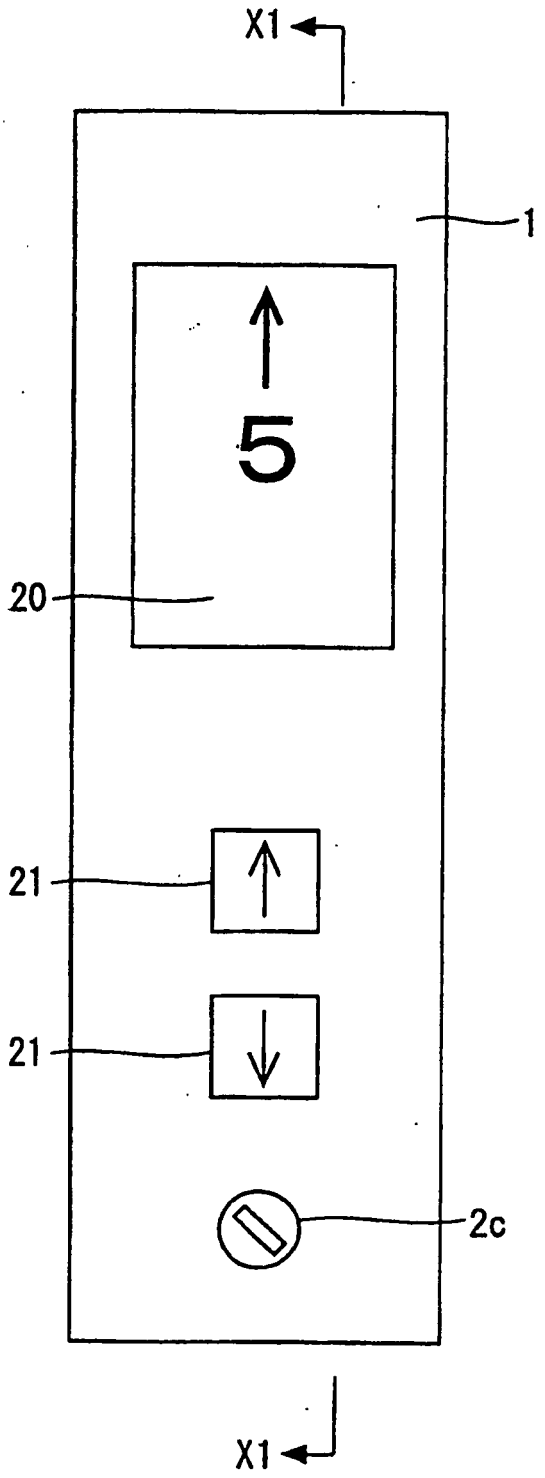


Fig. 1

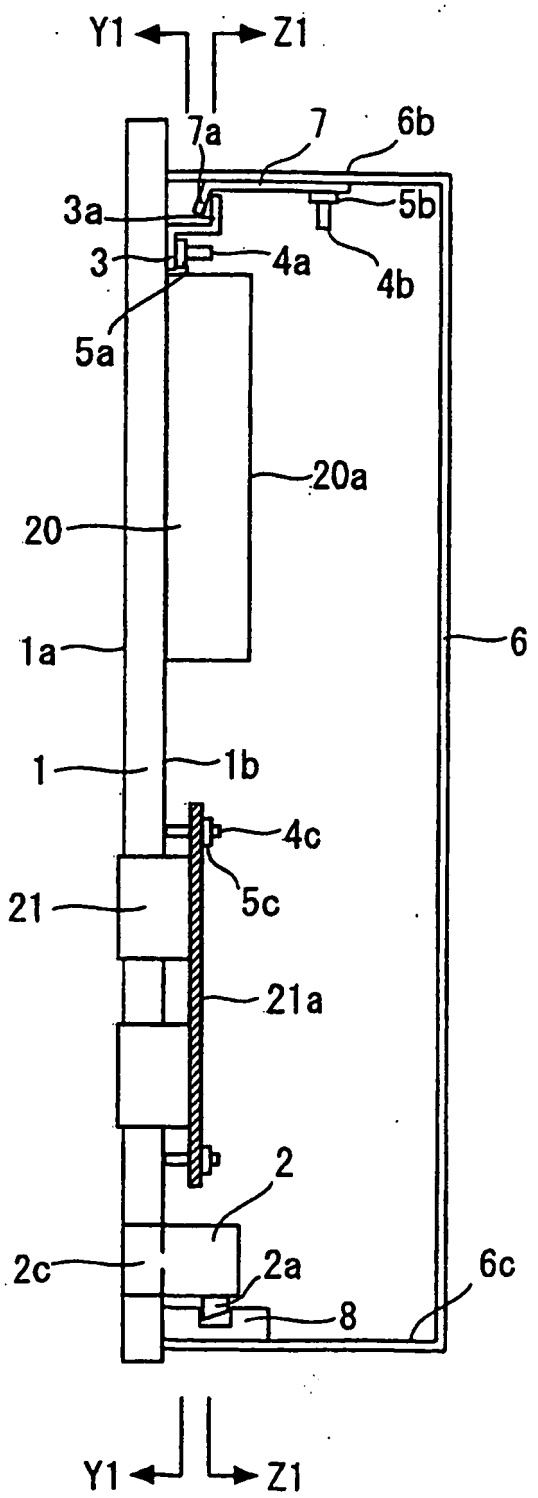

Y1
Z1
7a
7
6b
3a
5b
3
4a
4b
5a
20a
20
1a
6
1
1b
4c
5c
21
21a
2
2c
2a
6c
8
Y1
Z1

Fig. 2

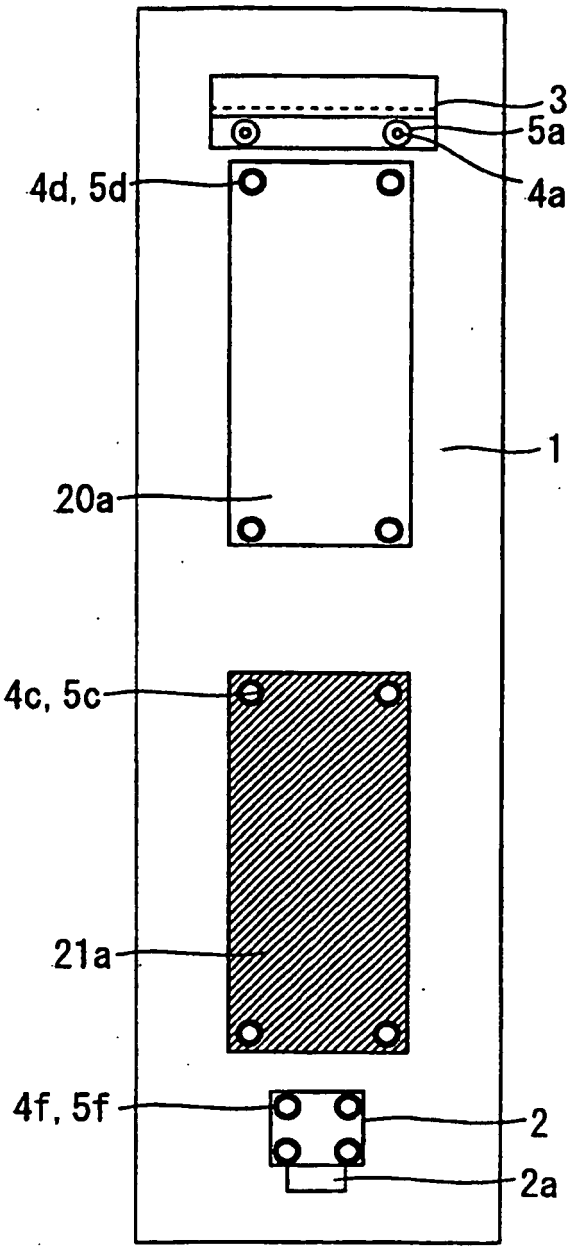


Fig. 3

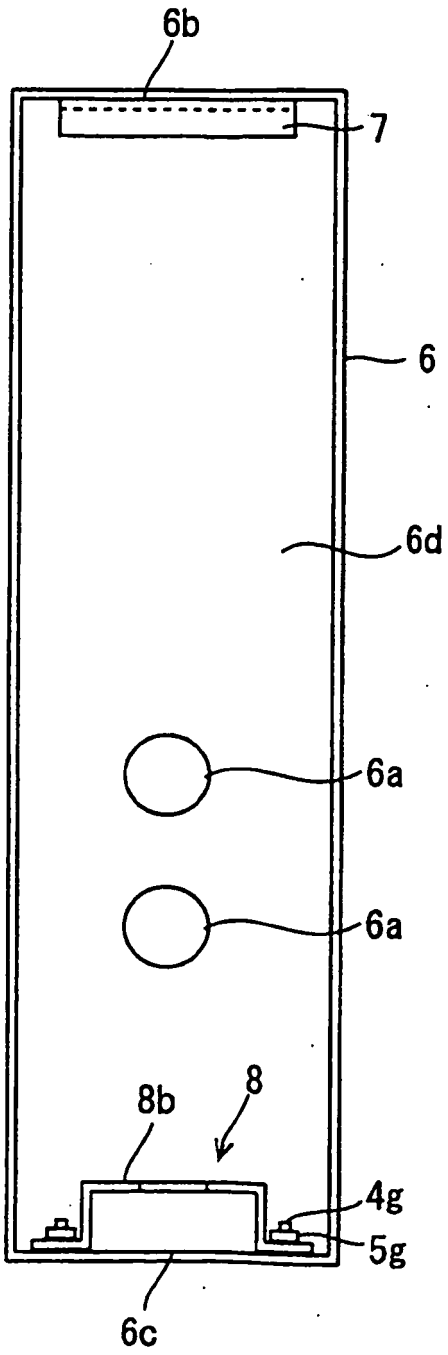


Fig. 4

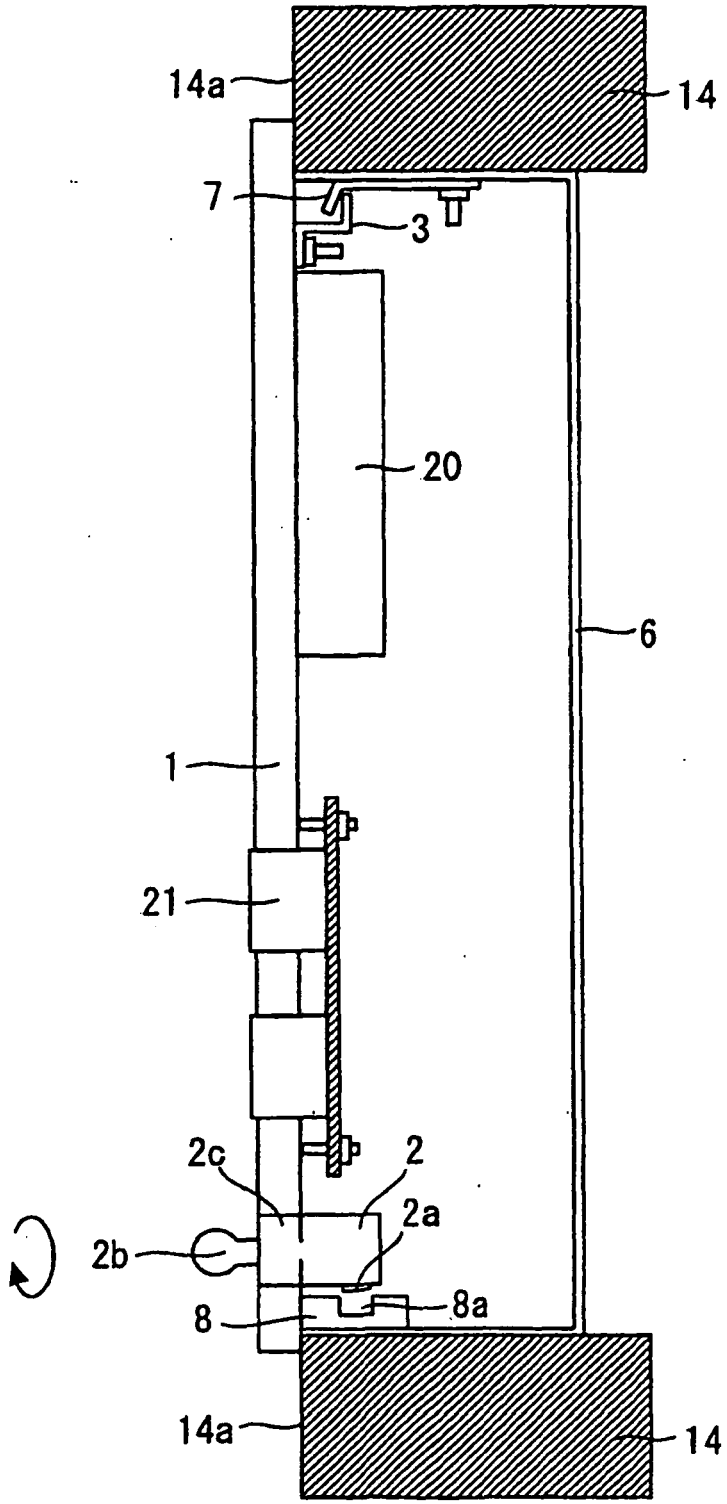


Fig. 5

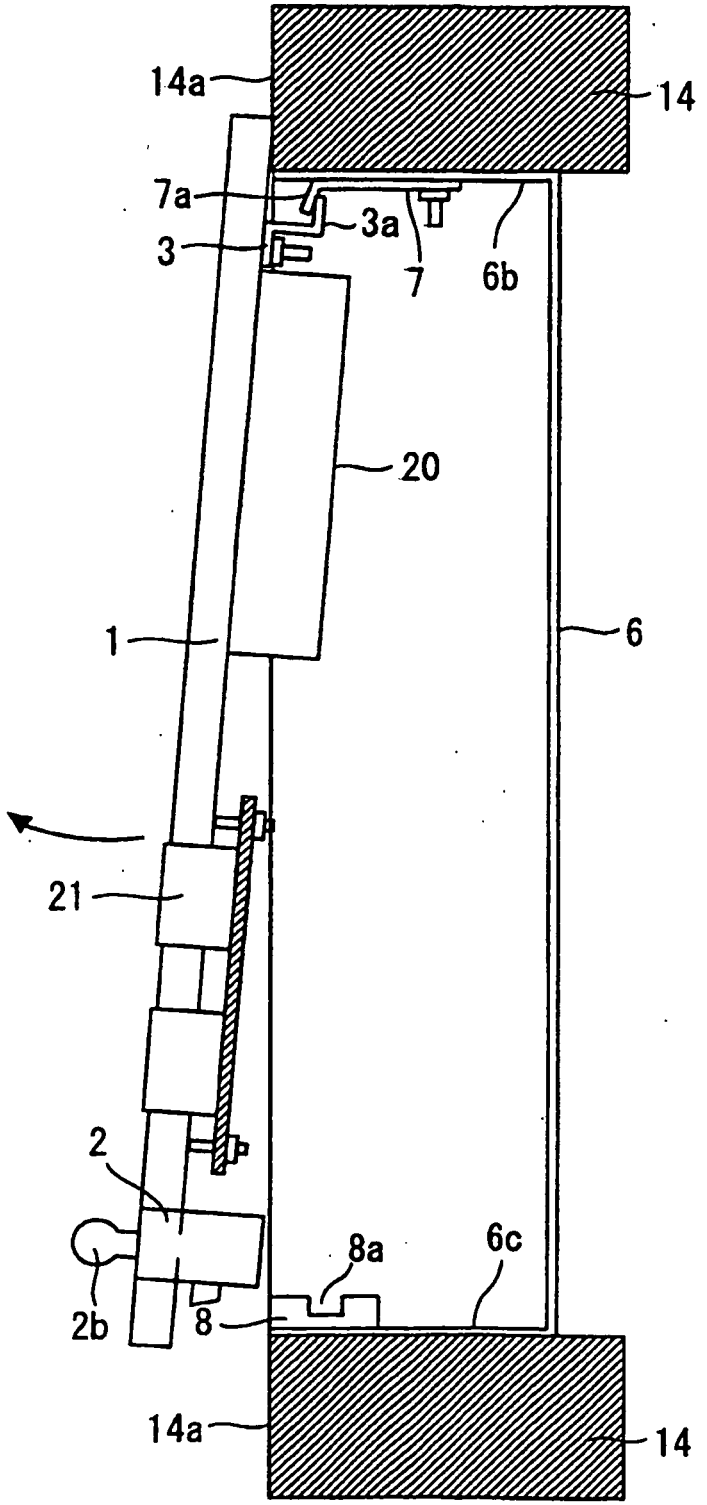


Fig. 6

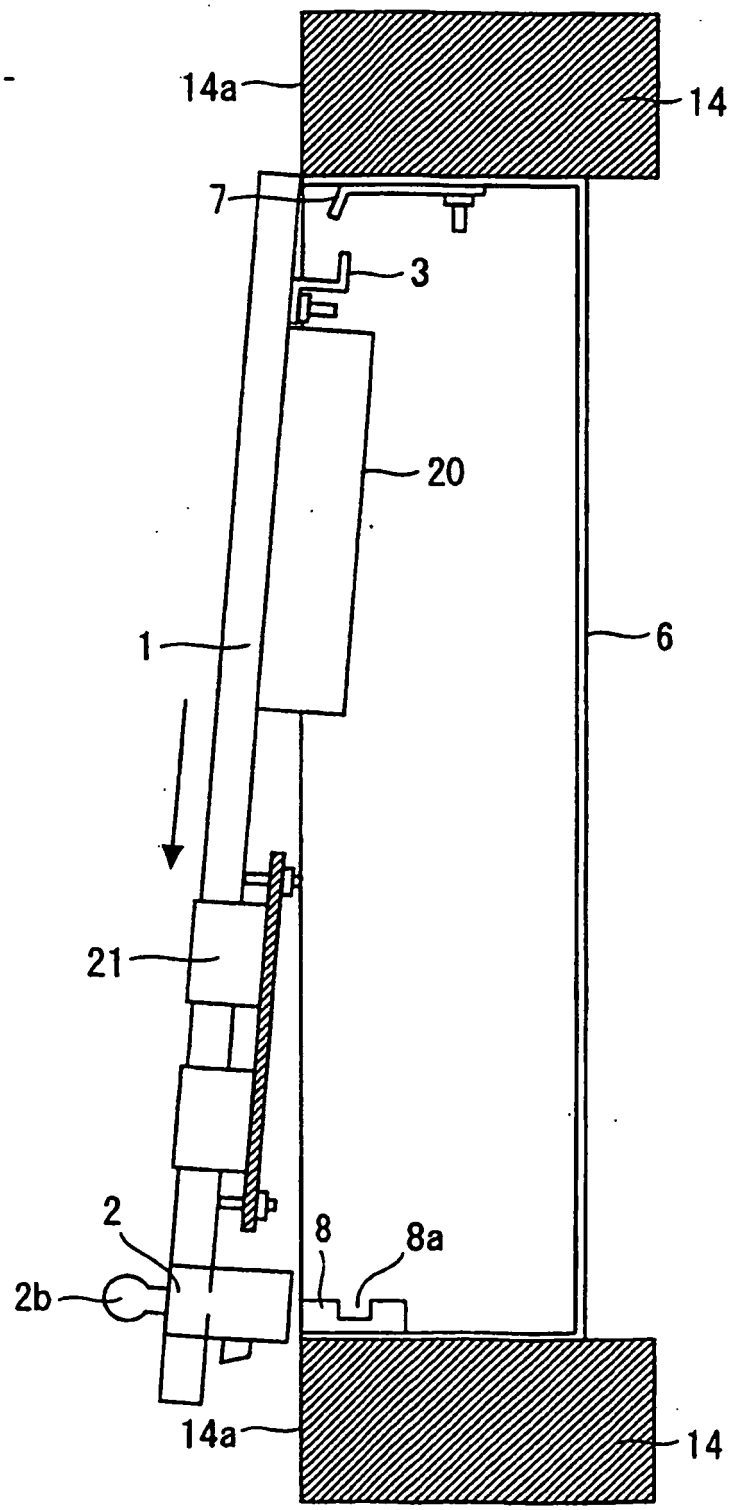


Fig. 7

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 6006359 A **[0003]**
- JP 5089372 A **[0003]**
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