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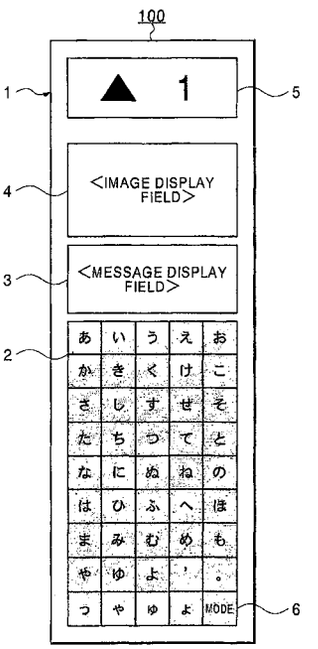
(54) OPERATING BOARD OF ELEVATOR

(57) A car operating panel for an elevator according to the present invention is connected to a control apparatus of the elevator and installed within a cage or at an elevator hall, and includes a touch panel (1) capable of changing over a plurality of screen images from one to another by touching a screen image being displayed, wherein the touch panel (1) can generate an ordinary screen display (Fig. 3) in which buttons for ordinary car operatings such as registration of a destination floor, opening of a cage door, closing thereof and the like make appearance, and a character input screen image (Fig. 1) in which buttons (2) capable of inputting given characters make appearance, whereby communication in characters can be realized between the cage and the elevator hall, a supervisor room and/or the monitoring center. Owing to this feature, even when the user should suffer deafness and dumbness or speech defect and lacks the ability to talk, the conditions prevailing within the cage can exactly be conveyed in characters.

FIG. 1



1 : TOUCH PANEL
2 : KEYBOARD DISPLAY FIELD (CHARACTER INPUT SCREEN IMAGE)
3 : MESSAGE DISPLAY FIELD (CHARACTER DISPLAY SCREEN IMAGE)
4 : IMAGE DISPLAY FIELD
5 : INDICATOR
6 : MODE CHANGEOVER BUTTON

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Description

TECHNICAL FIELD

[0001] The present invention relates to a car operating panel for an elevator in which a touch panel is made use of, and more particularly the invention is concerned with a car operating panel for an elevator which allows given or desired characters to be inputted by changing over display modes.

BACKGROUND TECHNIQUES

[0002] As the hitherto known or conventional car operating panel for the elevator in which the touch pane is employed, there may be mentioned the one disclosed, for example, in Japanese Patent Application Laid-Open Publication No. 144726/1994 (JP-A-6-144726). This type of car operating panel is so designed that screen images can be changed over by touching a display field of the panel with a finger for thereby allowing input operations to be performed in predetermined fixed manners. More specifically, in the individual screen images, relevant menus are displayed, respectively, whereby the user can select item or entry to be inputted by consulting the menu.

[0003] In the conventional car operating panel for the elevator of the arrangement described above, every screen image is destined for displaying the menu. Consequently, in the conventional car operating panel, only the predetermined car operatings and predetermined input operations set in advance can be performed, giving rise to a problem.

[0004] The present invention has been made for solving the problem described above and contemplates as an object to provide a car operating panel for an elevator which allows given or desired character(s) to be inputted.

DISCLOSURE OF THE INVENTION

[0005] A car operating panel for an elevator according to the present invention is connected to a control apparatus of the elevator and installed within a cage or at an elevator hall, and includes a touch panel capable of changing over a plurality of screen images from one to another by touching a screen image being displayed, wherein the touch panel can generate an ordinary screen display in which buttons for ordinary car operatings such as registration of a destination floor, opening of a cage door, closing thereof and the like make appearance, and a character input screen image in which buttons capable of inputting given characters make appearance.

[0006] Further, the buttons capable of inputting the given characters may be selected from a group consisting of Japanese kana-keys, alphabet keys and ten keys.

[0007] Further, a plurality of characters or alternatively numerals may be displayed on the buttons so that either the character or the numeral being displayed can be inputted in response to changeover of the modes.

[0008] Besides, the car operating panel may further include a character display field in which the characters inputted from the character input screen image are displayed for thereby making it possible to perform external communication in characters.

[0009] Additionally, the touch panel may be so arranged as to be automatically changed over to the character input screen image upon occurrence of abnormal event in the elevator.

[0010] Further, the car operating panel destined for installation at a department store or the like may be so designed that in response to inputting of a name of a commodity, a floor where the commodity is available can be registered.

[0011] Furthermore, the car operating panel destined for installation at a hospital or the like may be so designed that in response to inputting of a name of a patient, a floor including a room where the patient is resident can be registered.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

Figure 1 is a front view of a car operating panel for an elevator according to the present invention and shows the same in a state in which a Japanese kana character input screen image is displayed in a touch panel,

Fig. 2 is a block diagram showing interconnections among a hall-installed car operating panel, a cage-mounted car operating panel, a control console (control apparatus) of an elevator and a monitoring center or the like,

Fig. 3 is a view showing an ordinary screen image in which buttons for ordinary car operating make appearance,

Fig. 4 is a view showing another example of the ordinary screen image in which buttons for ordinary car operating make appearance,

Fig. 5 is a view showing a state in which an alphabetical character input screen image is displayed in a touch panel, and

Fig. 6 is a front view showing another example of the car operating panel for the elevator according to the present invention with buttons being shown as magnified.

BEST MODES FOR CARRYING OUT THE INVENTION

Embodiment 1

[0013] Figure 1 is a front view of a car operating panel for an elevator according to the present invention, showing a state in which a character input screen image is

displayed on a touch panel. Referring to Fig. 1, reference numeral 1 generally denotes a touch panel mounted on a car operating panel 100 which is installed at an elevator hall or mounted on an elevator car or cage, numeral 2 denotes a keyboard display field serving as a character input screen image for displaying characters and numerals to be inputted, numeral 3 denotes a message display field serving as a character display screen image in which character(s) and/or numeral (s) touched in the keyboard display field 2 and/or other message or the like is displayed, numeral 4 denotes an image display field 4 for displaying various sorts of images, numeral 5 denotes an indicator field 5 in which a direction and a position of the cage are indicated, and numeral 6 denotes a keyboard display mode changeover button for changing over keyboard displays appearing in the keyboard display field 2. The car operating panel 100 is installed at an elevator hall or mounted internally of the cage, wherein car operating of the car operating panel 100 is performed exclusively with the aid of the touch panel 1.

[0014] Figure 2 is a block diagram showing inter-connections among the hall-installed car operating panel 100, the cage-mounted car operating panel 100, a control console (control apparatus) 200 of the elevator and a monitoring center 300 or the like,

[0015] In an ordinary mode, there is displayed an ordinary screen image in which buttons for ordinary car operatings such as registration or entry of a destination floor, opening of a cage door, closing thereof and the like make appearance, as shown in Fig. 3 or Fig. 4. As can be seen in these figures, ten keys and ordinary destination-floor registering buttons are displayed in the ordinary screen image. The user can perform the ordinary car operatings such as registration of a destination floor, opening of the cage door, closing thereof and the like which viewing the ordinary screen image. Further, the user can change over the screen images shown respectively in Figs. 1, 3, 4 and 5 from one to another by pushing the keyboard display mode changeover button 6.

[0016] On the other hand, in the event of occurrence of abnormal event such as trouble of the elevator system or the like, the ordinary screen image automatically changes over to the screen image illustrated in Fig. 1 without pushing or touching the keyboard display mode changeover button 6. In that case, the user who suffers deafness and dumbness or speech defect can touch relevant keys in the keyboard display field 2 by himself or herself to thereby send characters inputted as a message to the monitoring center 300 or the like. In this manner, in the case where the user is a person who suffers deafness and dumbness or speech defect, communication with the characters can be realized between the cage and the elevator hall, a supervisor room and/or the monitoring center. Owing to this feature, the conditions prevailing within the cage can exactly be conveyed in characters even if the user lacks the ability to talk when he or she is saved.

[0017] Further, the car operating panel of the elevator destined for installation in a department store or the like may be designed such that the user can change over the keyboard display field to the state shown in Fig. 1 so that he or she can input the name of a commodity which the user wants to purchase, in response to which a destination-floor where the commodity is available can automatically be registered. Furthermore, the car operating panel of the elevator destined to be installed in a hospital or the like may be so arranged that by inputting a name of a patient with whom the user seeks interview, a relevant destination-floor is automatically registered. In this way, the car operating panel according to the present invention can find many and various applications.

Embodiment 2

[0018] Figure 6 is a front view showing another example of the car operating panel for the elevator according to the present invention with buttons being shown as partially magnified. In the car operating panel 101 according to the instant embodiment of the invention, a plurality of functions are imparted to each of the keys of the keyboard display field 2 which serves as the character input screen image, whereby the number of the keys is correspondingly decreased.

[0019] In the keyboard display field 2 displayed on the touch panel 1 according to the first embodiment of the invention, all the kanas or alternatively all the alphabets are displayed. By contrast, in the case of the instant embodiment of the invention, a plurality of characters and numeral can be displayed with a single button. By changing over the modes with the keyboard display mode changeover button 6, either the character(s) or the numeral being displayed is inputted.

[0020] With the structure or arrangement of the car operating panel for the elevator described above, the number of the display buttons can be decreased, whereby the size of the touch panel 1 can be reduced. By virtue of this arrangement, restriction imposed to the installing location can be mitigated and thus the device according to the present invention can be installed at a narrow or width-limited location such as a wing wall of the elevator.

INDUSTRIAL APPLICABILITY

[0021] A car operating panel for an elevator according to the present invention is connected to a control apparatus of the elevator and installed within a cage or at an elevator hall, and includes a touch panel capable of changing over a plurality of screen images from one to another by touching a screen image being displayed, wherein the touch panel can generate an ordinary screen display in which buttons for ordinary car operatings such as registration of a destination floor, opening of a cage door, closing thereof and the like make appearance, and a character input screen image in which

buttons capable of inputting given characters make appearance, whereby communication in characters can be realized between the cage and the elevator hall, a supervisor room and/or a monitoring center. Owing to this feature, even when the user should suffer deafness and dumbness or speech defect and lacks the ability to talk, the conditions prevailing within the cage can exactly be conveyed in characters.

[0022] Further, the buttons capable of inputting the given characters are selected from a group consisting of Japanese kana-keys, alphabet keys and ten keys. Thus, inputting of characters can easily be carried out.

[0023] Furthermore, a plurality of characters or alternatively numerals are displayed on the buttons and either the character or the numeral being displayed is inputted in response to changeover of the modes. By virtue of this feature, the number of buttons to be displayed can be decreased with the size of the car operating panel being correspondingly reduced.

[0024] Besides, the car operating panel may further include a character display field in which the characters inputted from the character input screen image are displayed for thereby allowing external communication to be performed in characters. Owing to this arrangement, the user can confirm the characters which he or she has inputted, whereby car operating performance can be enhanced. Additionally, external communication in character can be realized.

[0025] Additionally, the touch panel can automatically be changed over to the character input screen image upon occurrence of abnormal event in the elevator, whereby enhanced safety can be ensured because the characters can be inputted without delay.

[0026] Further, the car operating panel destined for installation at a department store or the like is so designed that in response to inputting of a name of a commodity, a floor where the commodity is available is registered. Thus, the user can register the floor where the commodity can be purchased even if he or she does not know the floor concerned, to his or her convenience.

[0027] Furthermore, the car operating panel destined for installation at a hospital or the like is so designed that in response to inputting of a name of a patient, a floor including a room where the patient is resident is registered. Thus, the user can register the floor concerned even when he or she can not specify it, to his or her convenience.

Claims

1. A car operating panel for an elevator which is connected to a control apparatus of the elevator and installed within a cage or at an elevator hall,

   characterized in that said car operating panel comprises

   a touch panel (1) capable of changing over a plurality of screen images by touching a screen image being displayed,

   said touch panel (1) having

   an ordinary screen display (Fig. 3) in which buttons for ordinary car operatings such as registration of a destination floor, opening of a cage door, closing thereof and the like make appearance; and

   a character input screen image (Fig. 1) in which buttons (2) capable of inputting given characters make appearance.

2. A car operating panel for an elevator set forth in claim 1,

   characterized in that said buttons (2) capable of inputting said given characters are selected from a group consisting of Japanese kana-keys, alphabet keys and ten keys.

3. A car operating panel for an elevator set forth in claim 1,

   characterized in that a plurality of characters or alternatively numerals are displayed on said buttons and that either the character or alternatively the numeral being displayed is inputted in response to mode changeover (Fig. 6).

4. A car operating panel for an elevator set forth in any one of claims 1 to 3,

   characterized in that said car operating panel further comprises a character display field (3) in which the characters inputted from said character input screen image (2) are displayed for thereby allowing external communication to be performed in characters.

5. A car operating panel for an elevator set forth in any one of claims 1 to 4,

   characterized in that said touch panel (1) is automatically changed over to said character input screen image (2 in Fig. 1) upon occurrence of abnormal event in said elevator.

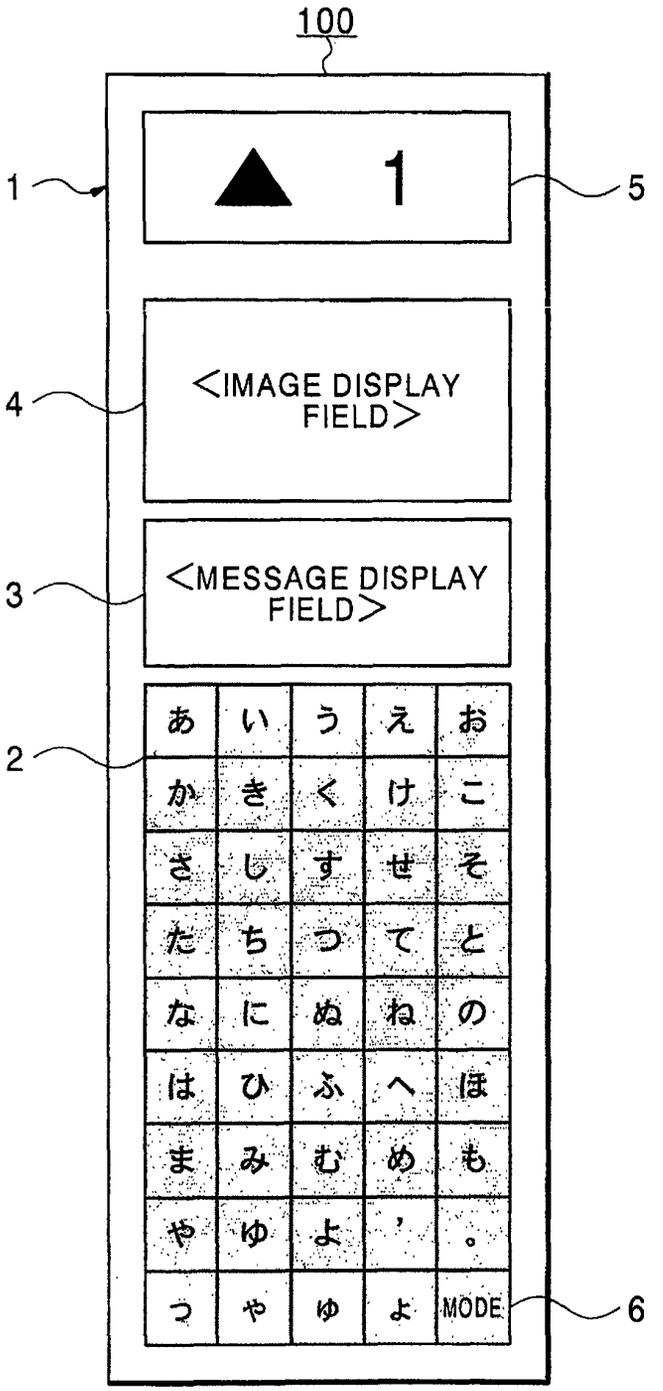
6. A car operating panel for an elevator set forth in any one of claims 1 to 5, said car operating panel being destined for installation at a department store or the like,

   characterized in that in response to inputting of a name of a commodity, a floor where said commodity is available is registered.

7. A car operating panel for an elevator set forth in any one of claims 1 to 5, said car operating panel being destined for installation at a hospital or the like,

   characterized in that in response to inputting of a name of a patient, a floor including a room where said patient is resident is registered.

FIG. 1



1 : TOUCH PANEL
2 : KEYBOARD DISPLAY FIELD (CHARACTER INPUT SCREEN IMAGE)
3 : MESSAGE DISPLAY FIELD (CHARACTER DISPLAY SCREEN IMAGE)
4 : IMAGE DISPLAY FIELD
5 : INDICATOR
6 : MODE CHANGEOVER BUTTON

FIG. 2

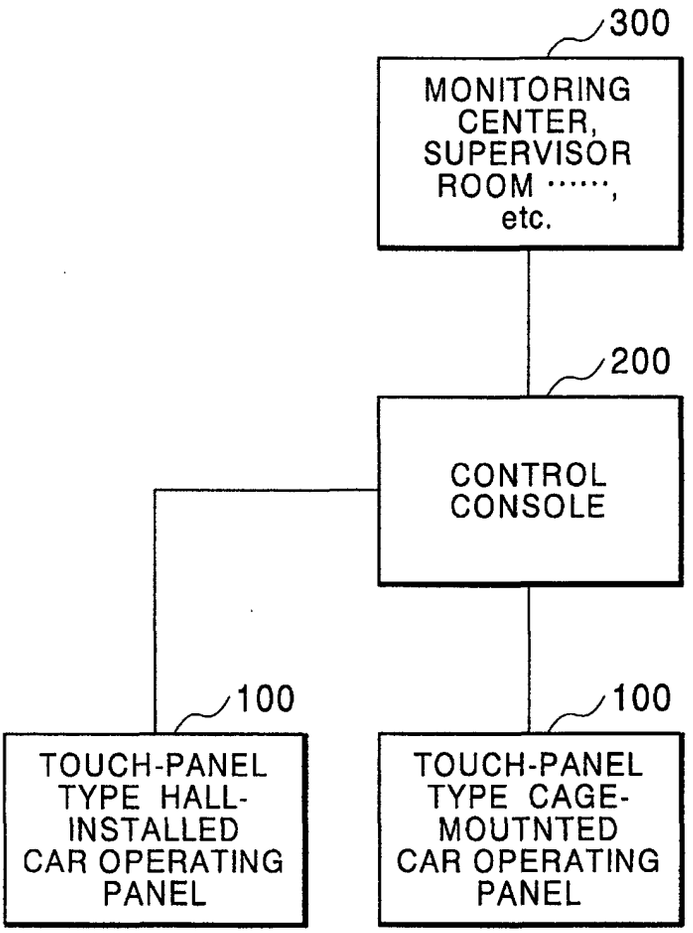

300
MONITORING CENTER, SUPERVISOR ROOM ·····, etc.
200
CONTROL CONSOLE
100
TOUCH-PANEL TYPE HALL-INSTALLED CAR OPERATING PANEL
100
TOUCH-PANEL TYPE CAGE-MOUTNTED CAR OPERATING PANEL

FIG. 3

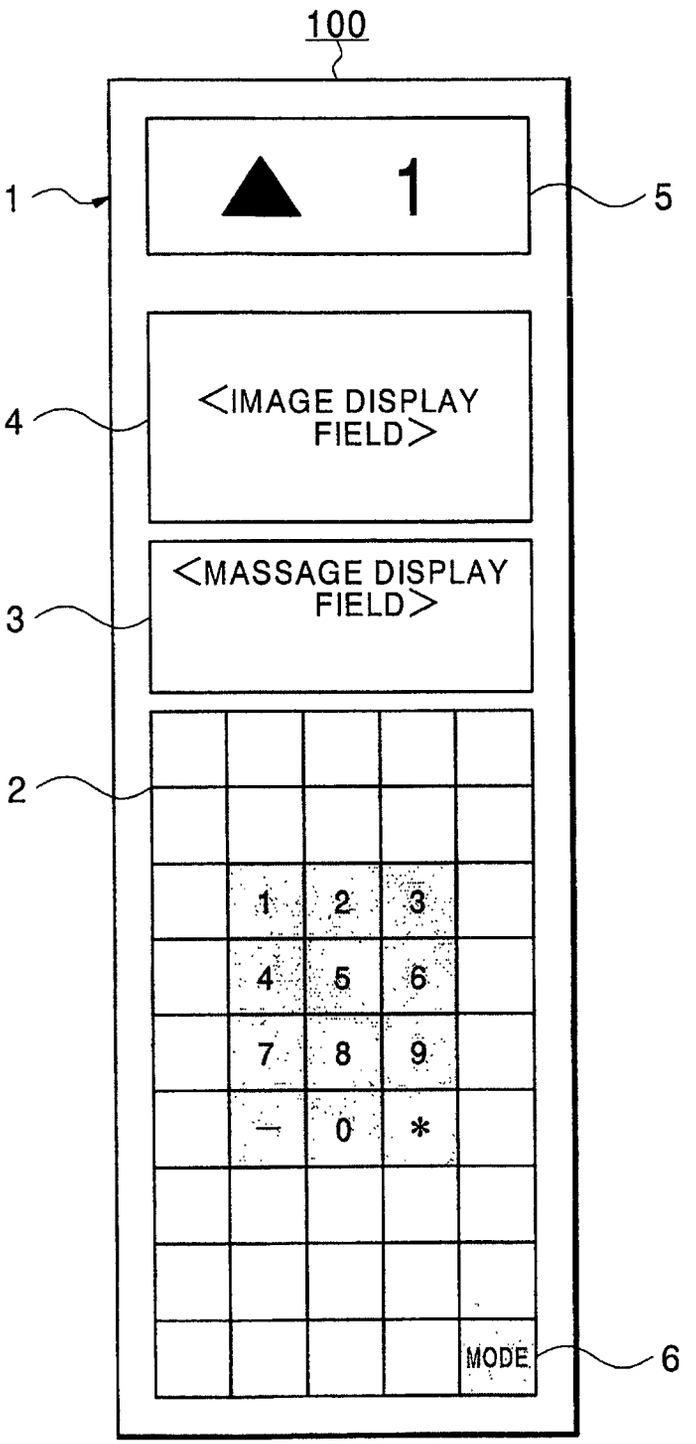

100
1
5
1
4
<IMAGE DISPLAY FIELD>
3
<MASSAGE DISPLAY FIELD>
2
1
2
3
4
5
6
7
8
9
–
0
*
MODE
6

FIG. 4

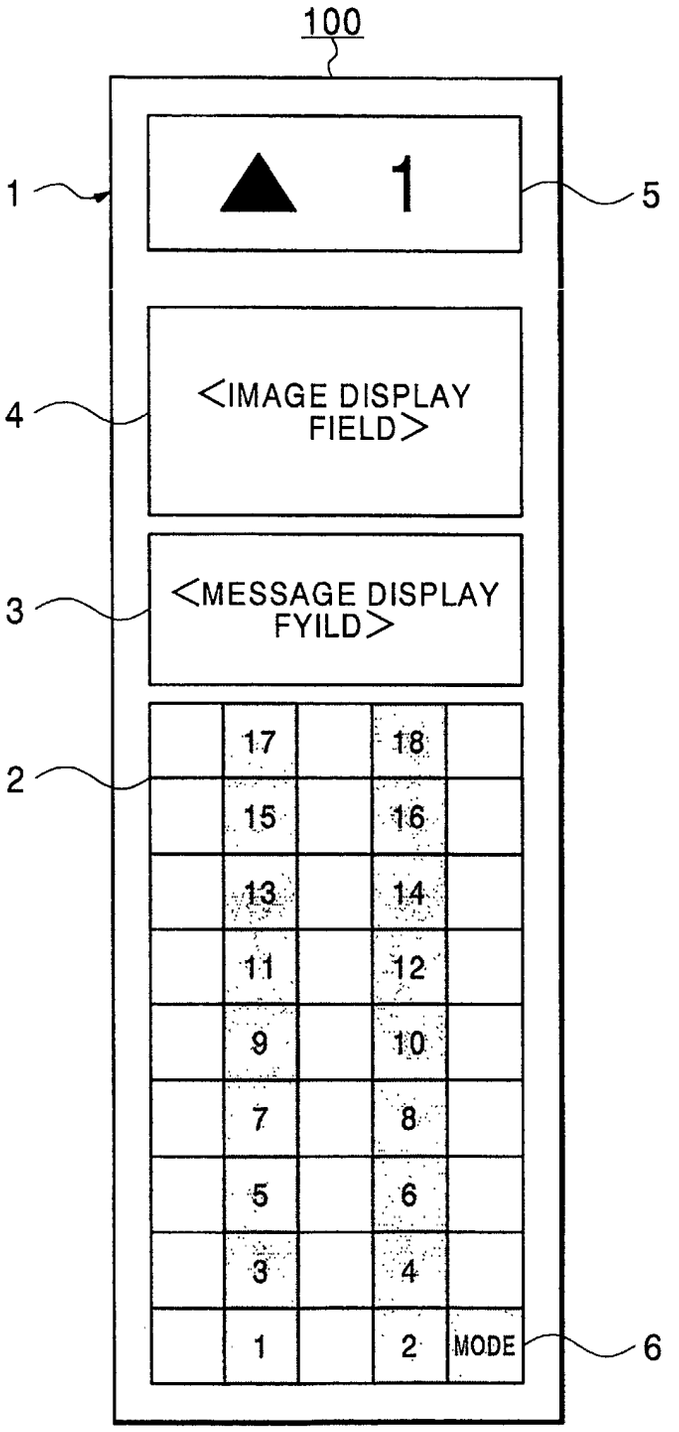

100
1
5
1
4
<IMAGE DISPLAY FIELD>
3
<MESSAGE DISPLAY FYILD>
2
17
18
15
16
13
14
11
12
9
10
7
8
5
6
3
4
1
2
MODE
6

FIG. 5

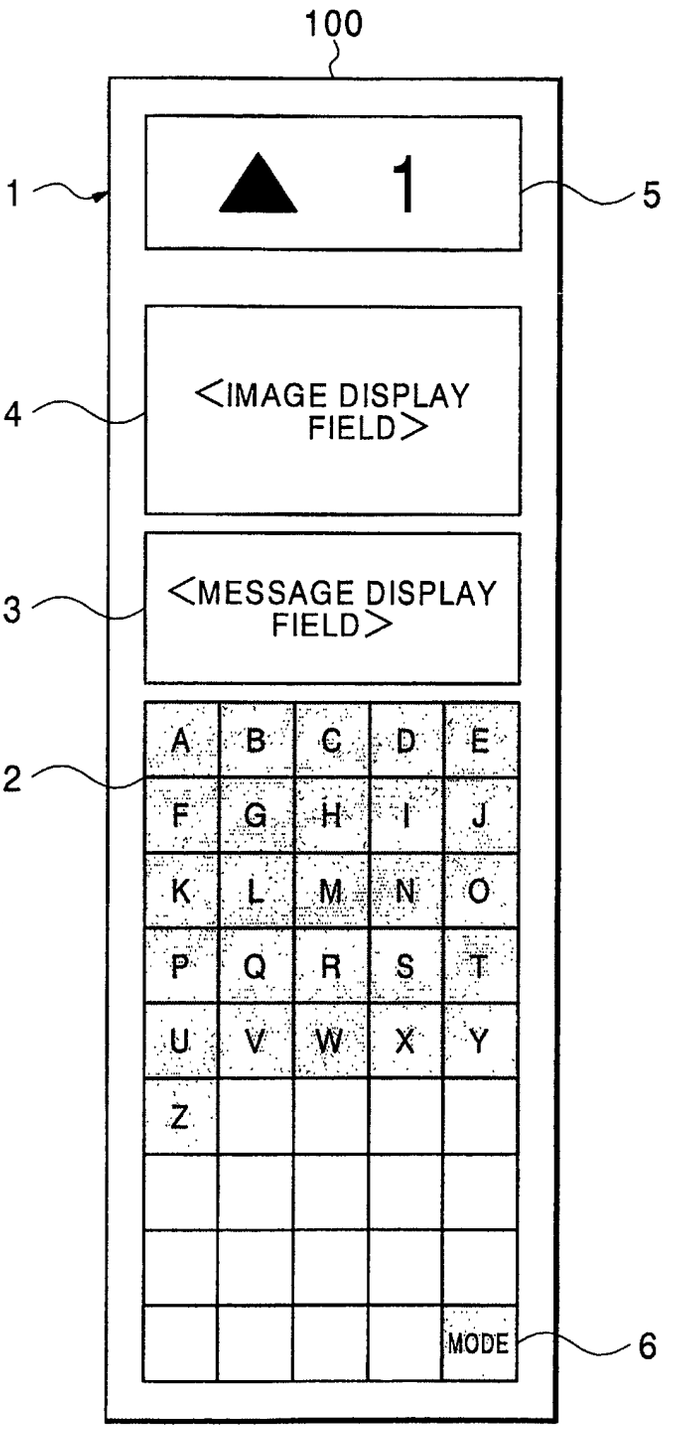
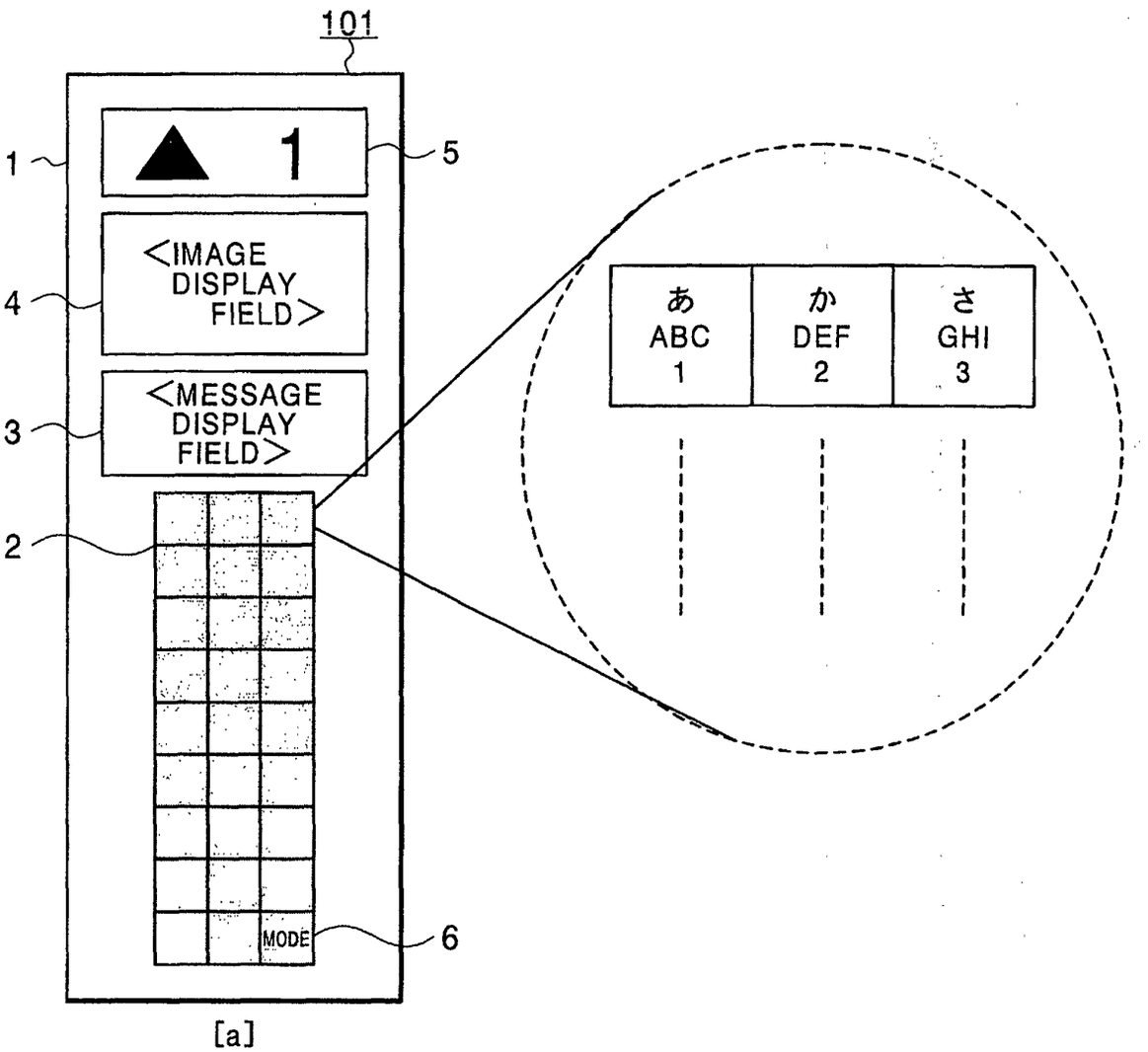

100
1
▲ 1
5
4
<IMAGE DISPLAY FIELD>
3
<MESSAGE DISPLAY FIELD>
2
A B C D E
F G H I J
K L M N O
P Q R S T
U V W X Y
Z
MODE
6

FIG. 6


101
1
5
1
<IMAGE DISPLAY FIELD>
4
<MESSAGE DISPLAY FIELD>
3
2
MODE
6
あ ABC 1
か DEF 2
さ GHI 3
[a]

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP00/05644

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl[7] B66B 1/46, 3/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] B66B 1/00-5/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1966	Toroku Jitsuyo Shinan Koho	1994-2000
Kokai Jitsuyo Shinan Koho	1971-2000	Jitsuyo Shinan Toroku Koho	1996-2000

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 11-139704 A (Hitachi Building Systems Co., Ltd.) 25 May, 1999 (25.05.99) (Family: none)	1-3,6-7 4-5
Y A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 16768/1991 (Laid-open No. 112868/1992), (Hitachi, Ltd.), 01 October, 1992 (01.10.92), (Family: none)	1-3,6-7 4-5
A	JP 9-151044 A (Hitachi Building Systems Co., Ltd.) 10 June, 1997 (10.06.97) (Family: none)	4-5

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search 16 October, 2000 (16.10.00)	Date of mailing of the international search report 24 October, 2000 (24.10.00)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 1992)