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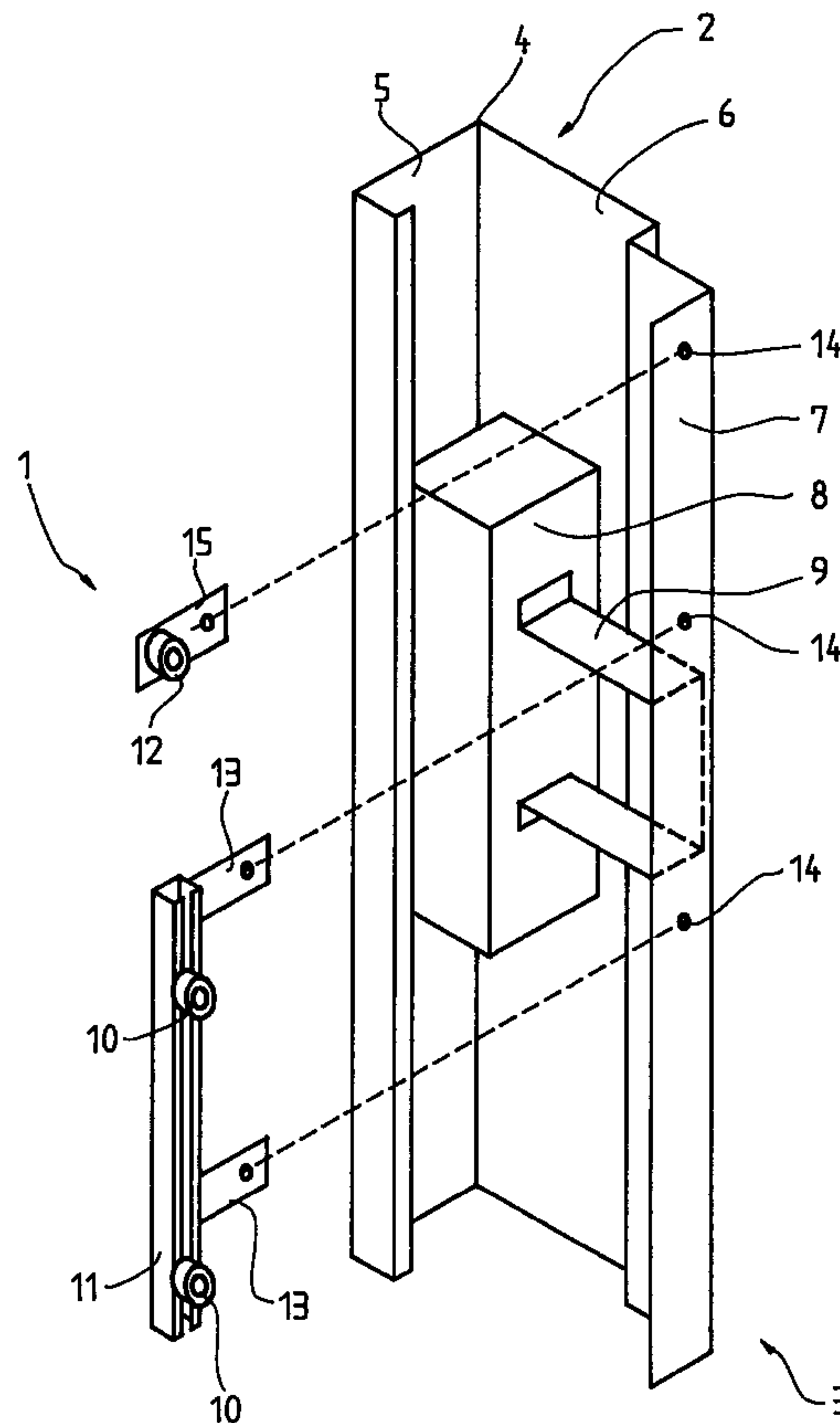
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(54) Titre : MATERIEL POUR RECUEILLIR DE L'INFORMATION SUR LA GAINE D'UN MONTE-CHARGE

(54) Title: EQUIPMENT FOR GENERATION OF SHAFT INFORMATION OF A LIFT INSTALLATION



(57) **Abrégé/Abstract:**

In this equipment for generation of shaft information, transmitter elements (10, 12) of a lift shaft (3) are arranged at the back part (7) of a frame (4) of a storey door (2). By means of the transmitter elements (10, 12), switchable transmitters are arranged at the back part of a frame of a cage door. Mounting time and costs are substantially reduced by the arrangement of the transmitter elements and transmitters at existing components.

Summary:

In this equipment for generation of shaft information, transmitter elements (10, 12) of a lift shaft (3) are arranged at the back part (7) of a frame (4) of a storey door (2). By means of
5 the transmitter elements (10, 12), switchable transmitters are arranged at the back part of a frame of a cage door. Mounting time and costs are substantially reduced by the arrangement of the transmitter elements and transmitters at existing components.

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(Fig.1)

Description:

Equipment for Generation of Shaft Information of a Lift Installation

- 5 The invention relates to equipment for generation of shaft information of a lift installation, consisting of a lift shaft with at least one storey door and a lift cage, which is movable in the lift shaft, with a cage door, wherein at least one transmitter element arranged in the lift shaft changes the switching state of at least one transmitter, which is arranged at the lift cage, during travel of the lift cage in the lift shaft.

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Magnets arranged in the lift shaft serve, together with magnet switches arranged at the lift cage, for the generation of shaft information. During travel of the lift cage in the lift shaft the magnet switches the magnet switch, which is usually constructed as a bistable switch, from one switching state into the other switching state, wherein the
15 instantaneous position of the lift cage in the lift shaft is determined for the lift control by the position of the relevant magnets. The magnets arranged, for example, in the region of storeys are usually arranged on rails with grooves, into which groove blocks are laid. The magnets are screw-connected to the groove blocks of the rails by means of screws, wherein the magnets are displaceable along the rails in the loosened state of the
20 screws.

A disadvantage of the known equipment resides in that an expensive mounting device for the magnets is necessary in the region of each storey, which causes substantial costs and mounting time.

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Here the invention will create a remedy. The invention meets the object of avoiding the disadvantages of the known equipment and of bringing about a simplification of the mounting of the transmitter elements and of the transmitters for generation of shaft information.

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The advantages achieved by the invention are essentially to be seen in that the means for mounting the transmitter elements are cheap in manufacture and simple for mounting. The mounting time is substantially shortened and the costs for the shaft information equipment significantly reduced relative to conventional systems.

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In one aspect, the present invention resides in equipment for generation of shaft information of a lift installation, including a lift shaft with at least one storey door and a lift cage, which is movable in the lift shaft, with a cage door, wherein at least one transmitter element arranged in the lift shaft changes the switching state of at least one transmitter, which is arranged at the lift cage, during travel of the lift cage in the lift shaft, wherein the transmitter element is arranged at an upright door element of the storey door and/or the transmitter is arranged at an upright door element of the cage door.

The invention is more closely explained in the following by reference to drawings illustrating an embodiment, in which:

Fig. 1 shows a frame of a storey door with transmitter elements for generation of shaft
5 information,

Fig. 2 shows a frame of a lift cage door with transmitters for generation of shaft
information and

10 Fig. 3 shows a horizontal section through the frames.

A storey of a lift installation is denoted by 1 in Figs. 1 to 3. A storey door 2 closes off the
storey 1 relative to a lift shaft 3. The storey door 2 comprises door leaves, which are not
shown, and a door element which is constructed as, for example, a frame 4 and which is
15 connected with the building structure. A first frame 4 consists of a first front part 5, a first
side part 6 and of a first back part 7. Arranged at the front part 5 is a housing 8 with
storey buttons and/or indicator elements, which housing is secured to the first back part 7
by means of a bracket 9. The elements, for example anchors and/or straps, for fastening
the frame 4 to the building structure are not illustrated.

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Serving for generation of shaft information are magnets 10 and 12, which are arranged at
a determined shaft height and which effect the switching over of a travel speed to a
crawling speed or the switching-off of the drive. First magnets 10, which serve for the
exact detection of the storey height, are arranged on, for example, a C-section profile
25 member serving as a carrier 11. The first magnets 10 are displaceable along the carrier
11 and are secured, by means of screws, to groove blocks in the C-section profile
member. The carrier 11 is arranged at the first back part 7 of the first frame 4 by means
of mounts 13, wherein the mounts 13 are secured, for example, at preformed first bores
14 of the first back part 7 by means of first screws 14.1. The second magnet 12 is
30 arranged at a first bracket 15, which is arranged, for example, in the upper or lower door
region at the first back part 7.

Figs. 2 and 3 show a cage door 17, which comprises not-illustrated door leaves and a
door element constructed as, for example, a second frame 16 and connected with the

building structure. The elements for fastening the frame 16 to the building structure are not illustrated. Magnet switches 18 and 19 are arranged at the second frame 16, which consists of a second front part 16.1, a second side part 16.2 and of a second back part 21, of the cage door 17 of a lift cage 17.1 and which are arranged at the second back part 21 of the second frame 16 by means of a second bracket 20. The second bracket 20 is secured at, for example, preformed second bores 22 of the second back part 21 by means of second screws 22.1. The first magnet switch 18 is actuated by means of the first magnets 10 and the second magnet switch 19 is actuated by means of the second magnets 12. A magnetic screen 23 is provided at the vicinity of the back part to ensure switching reliability of the magnet switches 18 and 19.

Fig. 3 shows a horizontal section through the frames 4 and 16, wherein a door abutting at the left and abutting at the right is illustrated.

Instead of the magnets 10 and 12 and magnet switches 18 and 19, transmitter elements and transmitters operating on a different principle of functioning, for example inductively, can be provided.

According to the respective disposition of the lift installation the magnets 10 and 12 or the magnet switches 18 and 19 can also be arranged at other components of the lift shaft 3 or the lift cage 17.1

What is claimed is:

1. Equipment for generation of shaft information of a lift installation, including a lift shaft (3) with at least one storey door (2) and a lift cage (17.1), which is movable in the lift shaft (3), with a cage door (17), wherein at least one transmitter element (10, 12) arranged in the lift shaft (3) changes the switching state of at least one transmitter (18, 19), which is arranged at the lift cage (17.1), during travel of the lift cage (17.1) in the lift shaft (3), wherein the transmitter element (10, 12) is arranged at an upright door element (4) of the storey door (2) and/or the transmitter (18, 19) is arranged at an upright door element (16) of the cage door (17).
2. Equipment for generation of shaft information according to claim 1, wherein the door element of the storey door (2) is a first frame (4) with a first back part (7), at which the transmitter element (10, 12) is arranged.
3. Equipment for the generation of shaft information according to claim 1 or claim 2, wherein the door element of the cage door (17) is a second frame (16) with a second back part (21), at which the transmitter (18, 19) is arranged.
4. Equipment for generation of shaft information according to claim 2, wherein the transmitter element (10) is displaceably arranged at a carrier (11), which is connected with the first back part (7) by means of mounts (13).
5. Equipment for generation of shaft information according to claim 2, wherein the transmitter element (12) is arranged at a first bracket (15), which is connected with the first back part (7).
6. Equipment for generation of shaft information according to claim 3, wherein the transmitter (18, 19) is arranged at a second bracket (20), which is connected with the second back part (21).
7. Equipment for generation of shaft information according to claim 6, wherein a screen (23) is provided between the transmitter (18, 19) and the second back part (21).

Fig. 1

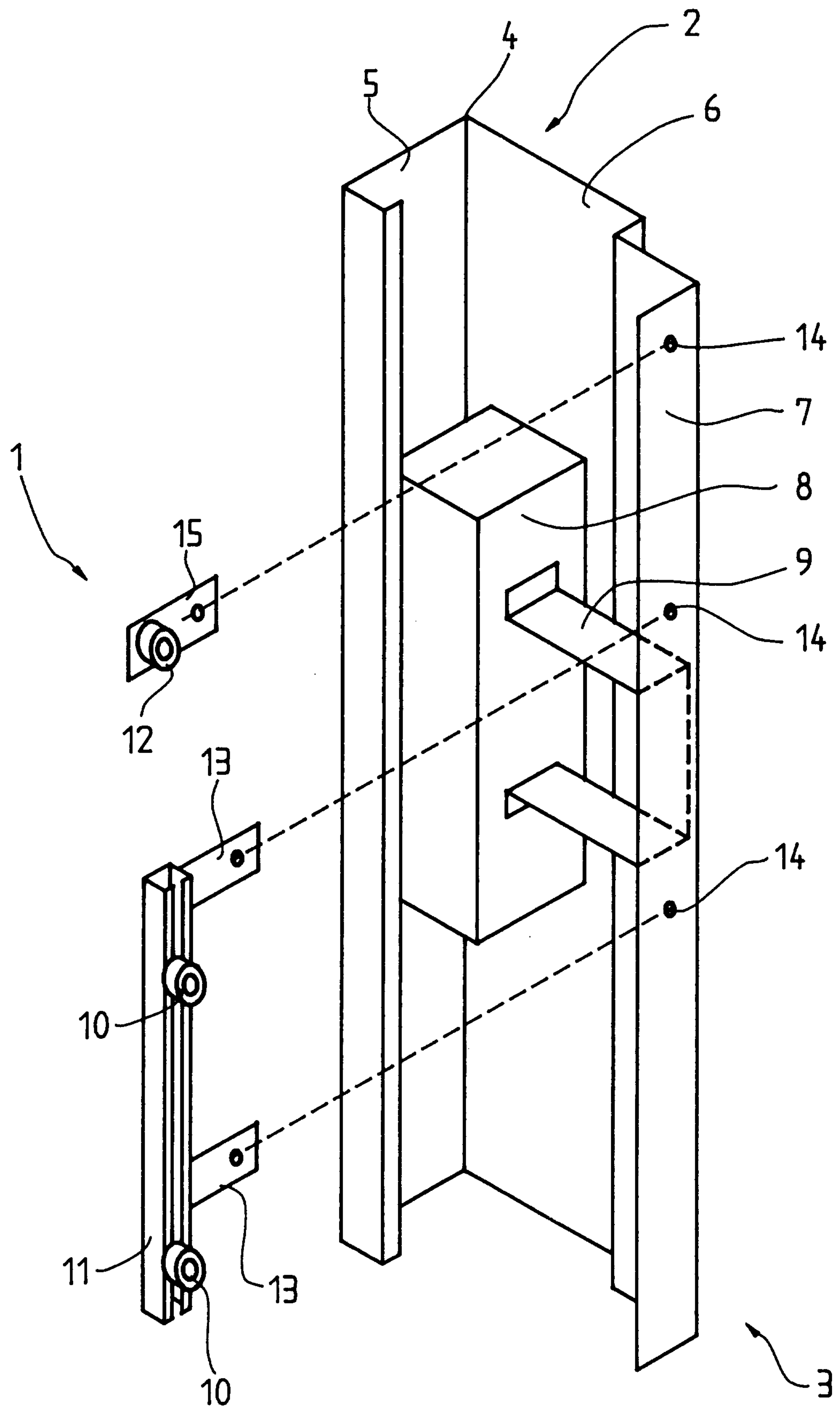


Fig. 2

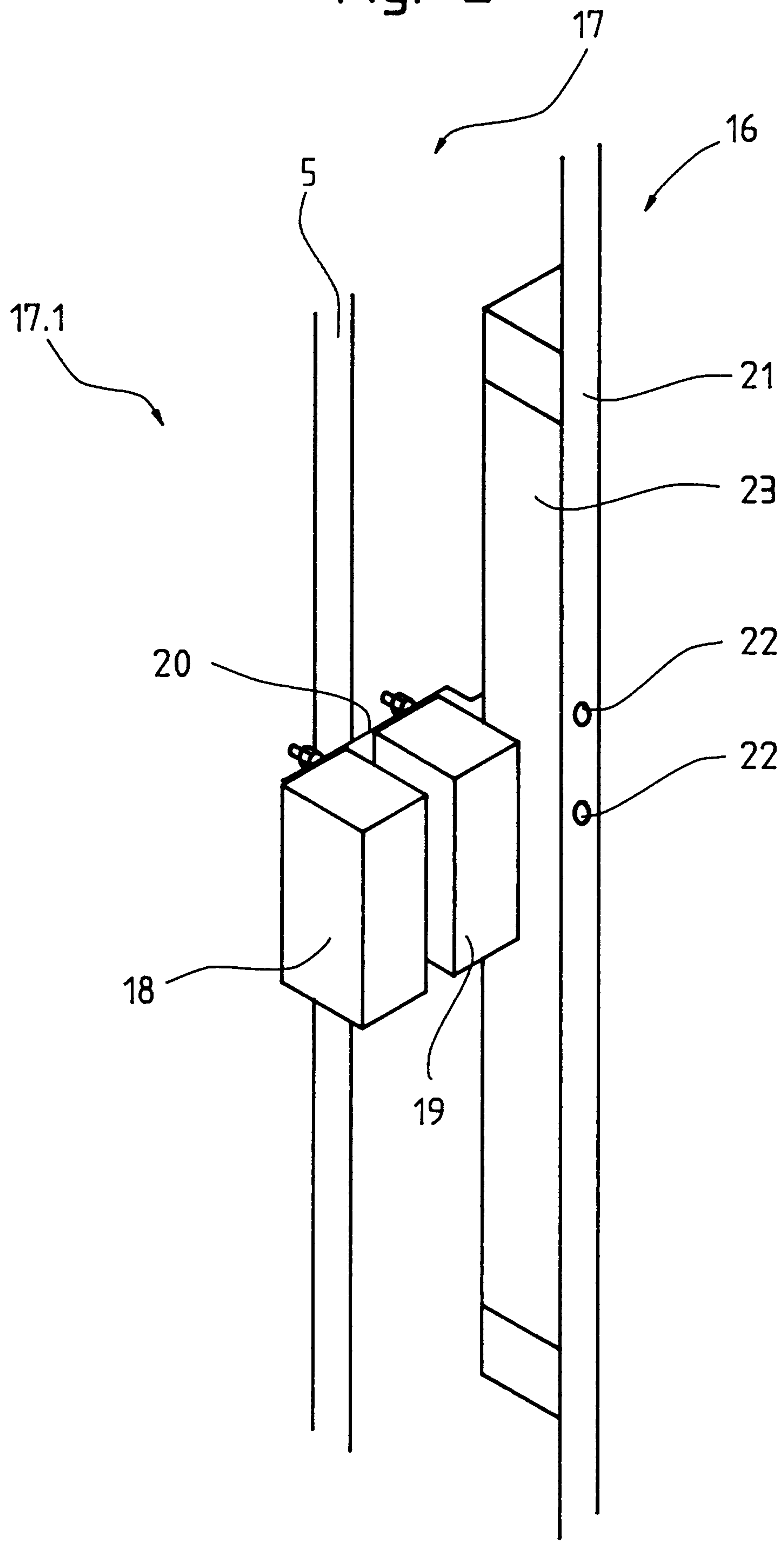


Fig. 3

