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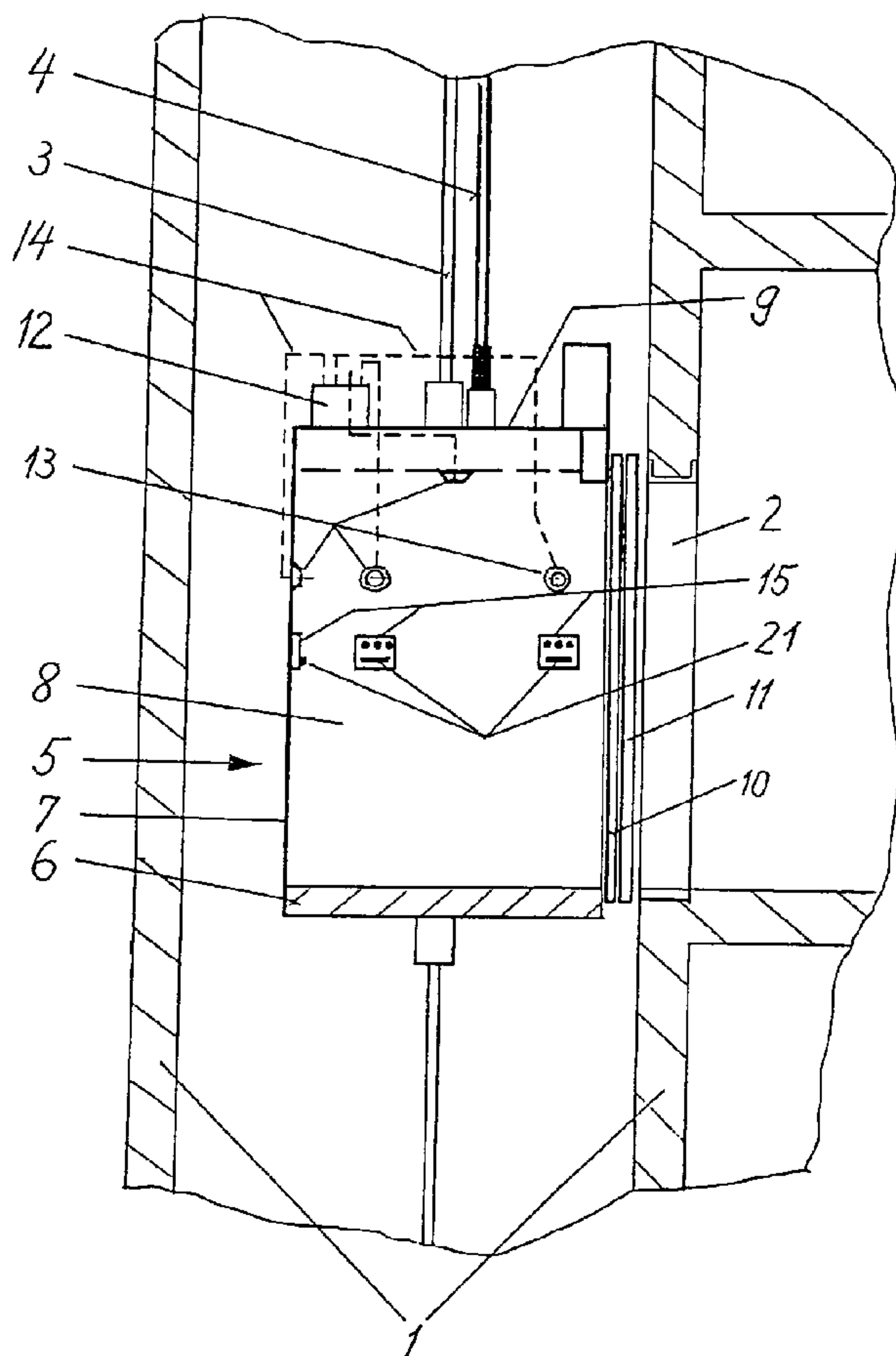
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(54) **PRODUCTION D'AROMES DANS DES INSTALLATIONS
D'ASCENSEUR**

(54) **GENERATION OF AROMAS IN ELEVATOR INSTALLATIONS**



(57) Elevator installations are equipped with devices (12) for releasing aromatic substances in elevator cars and on the landings. Each of the aroma generating devices (12) has controllable valves to control the release of a number of different aromas and fragrances through outlet jets (13) which can be positioned at a limited distance from the device. The aromatic substances are released in doses of such small quantity that they are only perceptible within a maximum radius of approximately 0.5 m about the outlet jet and that this perceptibility lasts for only some seconds. This makes it possible in an elevator car (5) or on a landing to release simultaneously from a number of jets (13) different fragrances and aromas without their combining with or negatively affecting each other.



Abstract:

Generation of Aromas in Elevator Installations

5 Elevator installations are equipped with devices (12) for
releasing aromatic substances in elevator cars and on the
landings. Each of the aroma generating devices (12) has
controllable valves to control the release of a number of
different aromas and fragrances through outlet jets (13)
10 which can be positioned at a limited distance from the
device. The aromatic substances are released in doses of
such small quantity that they are only perceptible within a
maximum radius of approximately 0.5 m about the outlet jet
and that this perceptibility lasts for only some seconds.
15 This makes it possible in an elevator car (5) or on a
landing to release simultaneously from a number of jets
(13) different fragrances and aromas without their
combining with or negatively affecting each other.

20 (Fig. 1)

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Generation of Aromas in Elevator Installations**5 Description:**

The invention relates to elevator installations which are equipped with one or more devices to release aromatic substances.

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Aromas are provably capable of positively affecting the well-being and mood of human beings. Today, aroma generating devices are mainly used in the retailing field, where investigations have confirmed that they influence the purchasing behavior of customers in the most varied ranges of goods, or serve to present perfumes.

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The subject of the present invention are elevator installations in which elevator cars move up and down either inside or on the outside walls of buildings, these cars usually being constructed as a housing of steel sheet, having an entrance which can be closed by a horizontally sliding door, as well as more or less complex ventilating equipment, and which contain aroma generating equipment to enhance the well-being of passengers.

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JP 07157242 A discloses an "Aroma generating device for elevator" with which, each time after a number of door movements have been executed, a dosing device for aromatic substances is activated in such a manner that a particular aroma is always perceptible in the elevator car.

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The effect of the device described is to maintain a pleasantly odored atmosphere in the elevator car; however,

there is only ever one single aroma which can be emitted, which disperses itself over the entire car.

The purpose of the present invention is to develop a device
5 with which effects can be created with aromatic substances in elevator installations in a novel manner which convey to the passenger a feeling of well-being and of personal attention being devoted to him/her.

10 According to the invention, this is achieved by there being released in one or more areas of the elevator installation aromas and fragrances depending on factors and circumstances such as, for example, preferences of passengers, travel destination, time of day or year,
15 quality of air, etc.

By means of the measures stated in the dependent claims, advantageous further development and improvement of the elevator installation stated in Claim 1 is possible.

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To achieve greatest possible individual assignment of the aromas, aroma generating devices are proposed which are capable of releasing portions of aromatic substances in such small quantities that they are only perceptible within
25 a maximum radius of approximately 0.5 m about an aroma outlet jet, for this reason do not influence each other, and their perceptibility lasts for only some seconds. This is achieved by a fine puff of air, which is controlled by valves, being blown through a small glass tube filled with
30 a crystalline granulate on whose extremely large surface the aroma molecules are spread.

Such an aroma generating device can accept several tubes of aromatic substances which are collected together in a package (cartridge) such that, by inserting the cartridge into the device, the closures of the ends of the tubes are
5 opened and the tubes are connected at each of their ends to a high-precision control valve. The control valve serves to control both the supply of compressed air from an air preparation device, and the flow of air out to the aroma outlet jets. The tubes contain different aromatic
10 substances, and by actuation of the control valve assigned to a particular tube up to 12 different aromas can be generated in fractions of a second. A single air preparation device which filters, dehumidifies, compresses, and cools the air supplies one or more such aroma
15 generating devices.

The invention provides for the release of aromas and fragrances both in one or more cars of an elevator installation, and on one or more landings in the vicinity
20 of the elevator doors. For each car a separate aroma generating device is installed on the car roof, and one device is also to be placed on each landing at which the aromatic effect is desired, for example behind the landing call and information panel.

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Either on an interior car wall, or on the car roof, of a car one or more aroma release jets is installed, these being supplied by a single aroma generating device. As a result of the limited area of perceptibility mentioned
30 above, it is possible to release simultaneously from the different jets doses of different aromas and fragrances without these interfering with or negatively affecting each other.

It goes without saying that what is stated above also applies in the case of aroma generating devices with multiple outlet jets on the landings.

5 In the case of multiple outlet jets per device, narrow tubes of limited length are laid between the aroma generating devices and the decentrally placed aroma outlet jets.

10 Person presence sensors, preferably reflected-light sensors, in the immediate proximity of the decentral aroma outlet jets trigger expulsion of a dose of aromatic substance when approached. By repeatedly retreating and re-approaching, the passenger can initiate multiple expulsions
15 of aromas, being able on suitable command devices in the vicinity of the jets to select a preferred aroma or, for example, a pre-programmed sequence of different aromas. In elevator installations which are equipped with a person identification system, for example for automatic
20 destination call, individually adapted aromatic effects can be generated depending on stored preferences of the passengers.

If in elevator cars, and/or in the vicinity of the landing
25 doors, visual, acoustic, or multimedia presentations are given as information, advertising, entertainment, etc. these can be effectively complemented by synchronously released aromatic signals.

30 By releasing special aromas and fragrances, it is also possible to convey information to the elevator users in a novel manner. For example, an aroma persisting for a period of several hours could inform the passengers of an elevator

inspection having taken place, or a different aroma could signal that lengthy waiting times are to be expected, etc.

The aroma generating system for elevator installations according to the invention has several advantageous effects.

Up to 12 different aromas and fragrances can be simultaneously released in a car, or in the area in front of a landing door, without their influencing each other, their perceptibility lasting only a few seconds. By this means, varied and entertaining effects can be implemented which cause the waiting and traveling times to appear shorter to passengers, and by means of individually selectable aromas the well-being of the passengers can be positively influenced. Furthermore, aromatic signals can be used as novel carriers of information.

An exemplary embodiment of the invention is shown in Figures 1 and 2 and described in more detail below.

Fig. 1 is a simplified illustration of a vertical section through a car 5 of an elevator installation. Also visible are elevator hoistway walls 1 with an entrance opening 2, car guiderails 3, car suspension ropes 4, and hoistway door panels 11. The elevator car 5, in which according to the present invention aromatic substances are released, consists essentially of car floor 6, car rear wall 7, car side walls 8, car roof 9, and car door panels 10. Installed on the car roof is an aroma generating device 12. The car contains several aroma outlet jets 13, which are connected via connecting tubes 14 to the aroma generating device 12.

Also illustrated are the person presence sensors 21 assigned to the aroma outlet jets 13, which when approached by a passenger trigger the release of a portion of aroma, as well as the command devices 15 with which the passengers
5 can influence the type and sequence of the aromas and fragrances to be released.

Fig. 2 shows a landing 16 with an elevator landing door 17, comprising a landing door frame 18 and two landing door
10 panels 11, and with a landing call and information panel 19 built into the wall of the landing. Visible in the illustration are an aroma generating device 12 integrated into the hoistway call and information panel 19, and several aroma outlet jets 13 integrated in the landing wall
15 or in the information panel 19. These are connected by the connecting tubes 14 laid in the landing wall 20 to the aroma generating device 12. Also visible here are the person presence sensors 21 assigned to the aroma outlet sensors 13 which trigger the release of a portion of aroma
20 when approached by a passenger, as well as three command devices 15 which allow the type and sequence of aromas to be released on the landing to be influenced by passengers.

Patent Claims:

1. Elevator installation comprising one or more elevators,
and containing one or more devices for generating
5 fragrances and aromas,
characterized in that
by means of such aroma generating devices aromas and
fragrances can be released depending on factors and
circumstances such as, for example, preferences of
10 passengers, travel destination, time of day or year,
quality of air, etc.
2. Elevator installation according to Claim 1
characterized in that
15 one or more aroma generating devices releases aromatic
substances in doses of such small quantity that they
are only perceptible within a limited radius about an
outlet jet and that this perceptibility preferably
lasts for only some seconds.
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3. Elevator installation according to Claim 1 or 2
characterized in that
such an aroma generating device can release several
different aromas and fragrances depending on control
25 commands.
4. Elevator installation according to one or more of the
foregoing claims
characterized in that
30 such aroma generating devices release aromas and
fragrances in the elevator cars and/or on the landings
in the vicinity of the elevator hoistway doors.

5. Elevator installation according to one or more of the foregoing claims characterized in that such aroma generating devices can release the different aromas and fragrances at one or more different points of an elevator car or of the vicinity of an elevator landing door.
6. Elevator installation according to one or more of the foregoing claims characterized in that the release of one single dose of aromatic substance is activated each time a person presence sensor assigned to an aroma release jet again detects after an interruption the presence of a person within the area of operation of this jet.
7. Elevator installation according to one or more of the foregoing claims characterized in that by means of suitable command devices positioned in the vicinity of the individual outlet jets passengers can influence the type of aromas and fragrances to be released.
8. Elevator installation according to one or more of the foregoing claims characterized in that the type of aromas and fragrances released is controlled on the basis of information from automatic person identification systems.

9. Elevator installation according to one or more of the foregoing claims characterized in that the release of aromas in the elevator cars and/or in the vicinity of the elevator landing doors is dependent on visual and/or acoustic presentations (information, advertising, entertainment, etc.) taking place.

10. Elevator installation according to one or more of the foregoing claims characterized in that special aromas communicate information to elevator passengers and building users that, for example, maintenance of the elevator has taken place, lengthy waiting times can occur, etc.

Fig. 1

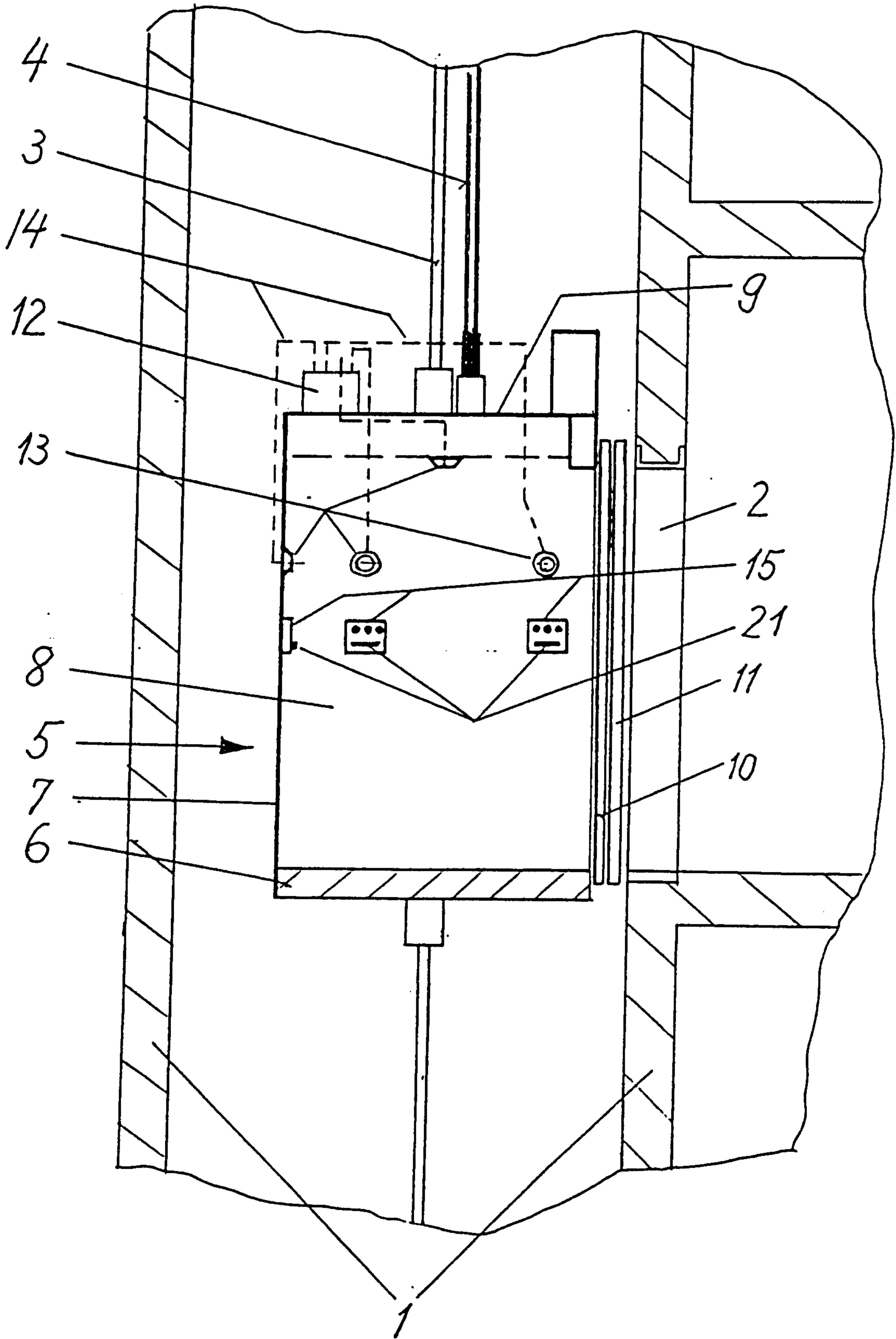


Fig. 2

