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(54) STATUS SIGNALING METHOD AND SYSTEM FOR AN ELEVATOR APPARATUS AND ELEVATOR APPARATUS COMPRISING SAID SYSTEM

(57) The present invention relates to a status signaling method and system for an elevator apparatus and elevator apparatus comprising said system, which allows signaling to users different statuses of the elevator apparatus prior to the calling action, as well as estimating the waiting time once it has been called, where the elevator apparatus comprises:
- a cabin (1) which can move between at least two floor levels (2, 2', 2"),
- at least one signaling element (3, 3', 3"),
- at least one call element (4, 4', 4") located on a floor level (2, 2', 2"), and
- at least one door (5, 5', 5") on a floor level (2, 2', 2") for accessing a cabin (1),

where the method comprises signaling a standby of the elevator apparatus, in which the elevator apparatus is operative but the cabin (1) is stopped and the doors (5, 5', 5") are closed, by means of the emission, through signaling elements (3, 3', 3"), of a first signal (s_1) having a intensity that is continuously variable between a maximum level and a minimum level.

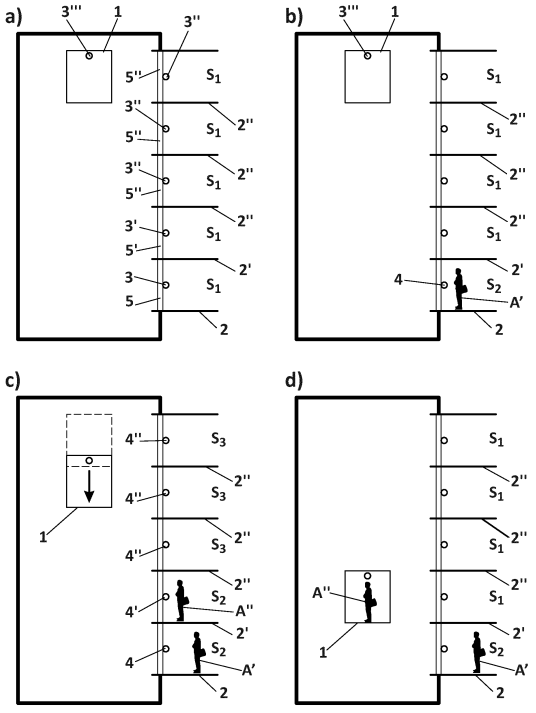

FIG. 1

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Description

Technical Field of the Invention

[0001] The present invention has an application in the elevator apparatus industry, and more specifically in the field of elevator apparatus signaling systems, which allow signaling to users different statuses of the elevator apparatus prior to the call action, which aids in its use and in the communication that the elevator apparatus makes with users.

Background of the Invention

[0002] In the field of elevator apparatuses today, there are signaling systems which allow informing the users of statuses or operations the elevator apparatus is performing at all times.

[0003] Among the elements integrating signaling systems of elevator apparatuses, the use of elements located on each floor, usually located on the frame of the door on the floor in the proximity of the call push-button of the elevator apparatus, is common. These signaling elements on the floor usually consist of lights which light up when a user calls the elevator apparatus, so that the user can know if the elevator apparatus has recorded the call.

[0004] In any case, the information that these signaling systems offer, especially from the point of view of users who are on the floor, is fairly limited, there being situations in which the user cannot be provided with useful information, especially for deciding whether or not to perform the call action, with the subsequent waste of energy and/or waste of time this often entails.

[0005] In this sense, a user located on the floor finds it difficult to know if the elevator apparatus is inoperative either because of a malfunction or because inspection and/or maintenance operations are being carried out. Said user also finds it difficult to know elevator apparatus availability at that time, for example if the cabin is empty or full, and in the latter case, if it is partially or completely full. Users located on the floor also find it difficult to know the level or degree of traffic as well as other statuses of the elevator apparatus, such as an energy-efficient mode, for example.

[0006] There is currently no signaling system that allows solving the deficiencies and problems described above, such that the user has complete and updated information about the status of the elevator apparatus at all times.

Description of the Invention

[0007] A first aspect of the present invention relates to a status signaling method for an elevator apparatus, which allows signaling, i.e., representing and showing the status of the elevator apparatus so that a user can make a decision concerning the use thereof prior to the call action, which allows considerable energy savings and rationalization as regards use thereof, preventing unnecessary wastes of time during transit as well as to improve and make the person-machine communication established between the elevator apparatus and its users human-like, such that use thereof is more appealing for users.

[0008] According to the method proposed by the invention, the elevator apparatus comprises:

- at least one cabin which can move between at least two floor levels,
- at least one signaling element,
- at least one call element located on a floor level, and
- at least one door located on a floor level, allowing access from said floor level to said at least one cabin.

[0009] According to the invention, the method comprises signaling a standby of the elevator apparatus, in which the elevator apparatus is operative but said at least one cabin is stopped and said at least one door is closed, by means of the emission, through said at least one signaling element, of a first signal having a intensity that is continuously variable between a maximum level and a minimum level.

[0010] Unlike signaling systems of the state of the art, in which no signal whatsoever is emitted when the elevator apparatus is operative and available but has not been called by any user, such that the user cannot distinguish between the inoperative and operative statuses of the elevator apparatus, in the case of the invention, the signaling system allows the user to know if the elevator is operative and furthermore available for being called, prior to actuating the call element, which can be a push-button panel that can be actuated by means of the user pushing it, or any other remote actuation element, such as, among others, a presence sensor or a digital call element, such as a card reader.

[0011] Additionally, the fact that the first signal has a intensity that is continuously variable between a maximum level and a minimum level gives the elevator apparatus a human-like character in which when it is in said status, said signal simulates a breathing or pulsing status of the elevator apparatus, which aids in the use thereof by users as the elevator apparatus is portrayed as having artificial intelligence, breathing as if it were alive and reacting when called, for example when pushing a button.

[0012] The invention is constituted as a simple and low-cost solution.

[0013] The possibility of at least one signaling element comprising a light signal emission element comprising a light signal emission space is contemplated. Likewise, according to a preferred embodiment, said at least one signaling element can be located on a floor level. At least one call element comprising a push-button element incorporating a signaling element in turn comprising a light signal emission element is contemplated.

[0014] As an alternative to the foregoing, even though both solutions can be complemented, at least one sign-

aling element comprising a sound signal emission element is contemplated. A breathing sound can be simulated with it, the system thereby signaling the status of the elevator apparatus for the blind, being able to consist of a purring sound, buzzing sound or quiet whisper.

[0015] With the elevator apparatus being in standby, when a call element located on a first floor level is actuated, the possibility of at least one signaling element located on said first floor level beginning to emit a second signal until said at least one cabin moves and stops on said first floor level is contemplated. The user can thereby know that the elevator has been called and responds to the user's call, leaving the previous status. Said second signal can be selected from:

- a signal having a fixed intensity,
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal but with a different tone, and
- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value other than the maximum and minimum levels of the first signal.

[0016] Therefore, before the elevator apparatus is called, all the signaling elements are blinking, i.e., pulsing or breathing, such that when a call element, which can be a push-button located on the floor, is actuated by the user, the signaling element located on said floor reacts by changing the emitted signal, such as, among other options, being completely lit up with a fixed or constant light or sound, whereas the remaining signaling elements located on other floors are maintained with the first signal, i.e., blinking or breathing, until another user calls the elevator on said floors.

[0017] With the elevator apparatus being in standby, when a call element located on a first floor level is actuated, the possibility of at least one signaling element located on said first floor level beginning to emit a second signal until said at least one cabin moves and stops on said first floor level is likewise contemplated, where the second signal can be selected from:

- a signal having a fixed intensity,
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal but with a different tone,
- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value other than the maximum and minimum levels of the first signal, and
- a signal having a fixed or variable intensity which is variably distributed in the light signal emission space over a specific time.

[0018] Therefore, once users actuate the call element, they can be provided with information relating to the waiting time when said time corresponds with the time in which the signal is being distributed in the signal emission space until completing it. Said space can be planar or have a certain three-dimensional shape, such as that of a spherical cap, for example.

[0019] The possibility of the variation in intensity between a maximum level and a minimum level of the first signal being periodic according to a first period is contemplated, where prior to the standby, the elevator apparatus is in an energy-efficient status, which it enters when a time t in which the elevator apparatus is in standby without any call element having been actuated has lapsed, going from the energy-efficient status to standby when a call element is actuated. In said energy-efficient status, said at least one signaling element emits a periodic energy-efficient signal that can be selected from:

- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value less than the maximum and minimum levels of the first signal, and
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal but according to an energy-efficient period greater than the first period of the first signal.

[0020] The user can thereby know prior to actuating the call element that the elevator apparatus is operating and that it has entered an energy-efficient, sleep, or stand-by status. When the user actuates the call element, the elevator apparatus changes status, showing said information, for example by means of the change in the blinking or pulsing rate or frequency. Said information is likewise available for users located on other floors, who can be provided with information relating to the elevator apparatus being in an energy-efficient status and to it having been called on another floor by another user.

[0021] Likewise, in order for users to be provided with real-time information concerning the availability, level of traffic or degree of solicitation of the elevator apparatus, the variation in intensity between a maximum level and a minimum level of the first signal being periodic according to a first period is contemplated, where after the actuation of a call element located on a first floor level and prior to the stopping of said at least one cabin on said first floor level, a call element located on a second floor level is actuated, after which the signaling elements located on floor levels other than said first floor level and second floor level begin to emit a periodic third signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal according to a third period different from the first period.

[0022] In other words, when the elevator apparatus is called by a first user and is called right away by a second user located on another floor, the blinking frequency or rate of the signal changes, thereby showing other users that the traffic to which the elevator apparatus is subjected is high, such that the waiting time may be greater, which allows users to make a decision about the use

thereof, with the subsequent energy and time savings this entails, since the elevator is not called by a user who has no intention of waiting for long. The fact that the pulsing frequency changes makes communication between apparatus and user human-like given that according to a preferred embodiment it corresponds to an increase in animal heart rate when excessive effort is performed, so for example a low pulsing rate range would correspond with a status in which the elevator is available and traffic is low, whereas a high pulsing rate range would correspond with a status in which the elevator has high occupancy and traffic is high. Likewise, use of intermediate modes for the third signal as regards frequency to show solicitation by a third user and others is contemplated. This solution is particularly useful in buildings in which there are groups of elevators that can have 6 or 8 elevators, as an indication of traffic for users.

[0023] The signaling elements located on all the floor levels, except the floor level towards which said at least one cabin is heading, beginning to emit the first signal once said at least one cabin has stopped on one of said first or second floor levels, and moves towards the other of said first floor level and second floor level, is contemplated. The user therefore knows that the elevator has returned to a status in which it is available to respond first to said user's call.

[0024] At least one signaling element being located inside said at least one cabin is likewise contemplated. Particularly in glass elevators, this allows users located on the floor to likewise be provided with information about the status of the elevator apparatus prior to actuating a call element.

[0025] The possibility of no signaling element emitting a signal when the elevator apparatus is inoperative is contemplated. This allows providing said information to the user, who will not actuate any call element in such situation, preventing any waste of time as well as putting operators who are performing maintenance tasks on the elevator apparatus at risk in certain situations. An inoperative status includes when maintenance operations are performed and also the case of a malfunction, i.e., the elevator does not work and does not respond to a call.

[0026] A second aspect of the invention relates to a status signaling system for an elevator apparatus. In such case, the elevator apparatus comprises:

- at least one cabin which can move between at least two floor levels,
- at least one signaling element,
- at least one call element located on a floor level, and
- at least one door located on a floor level, allowing access from said floor level to said at least one cabin.

[0027] According to the invention, said at least one signaling element can emit a first signal having a intensity that is continuously variable between a maximum level and a minimum level when the elevator apparatus is in standby, in which it is operative but said at least one cabin is stopped and the doors are closed. According to the invention, the system comprising any of the elements described above for the different possibilities contemplated in the signaling method of the invention is contemplated.

[0028] Finally, a third aspect of the invention relates to an elevator apparatus comprising a signaling system like the one described above. Applying the signaling system of the invention in a group of elevators is likewise contemplated.

Description of the Drawings

[0029] To complement the description being made and for the purpose of aiding to better understand the features of the invention according to a preferred practical embodiment thereof, a set of drawings is attached as an integral part of said description in which the following has been depicted with an illustrative and non-limiting character:

Figure 1 shows four schematic views, according to a longitudinal section of an elevator apparatus, of a sequence of one embodiment of the method according to the invention, where in view a) the apparatus is in the operative status and the cabin is stopped without having been called by any user, in view b) the elevator is called by a first user, in view c) the elevator is called by a second user located on another floor, and in view d) the cabin is heading towards the first user after having picked up the second user.

Figure 2 shows five schematic views of a second embodiment of the method, where views b), c), and d) correspond with those of Figure 1, whereas the initial view a) and final view e) of the sequence represent an energy-efficient status.

Figure 3 shows three schematic views a)-c) depicting an embodiment in which each call element comprises a push-button element incorporating a signaling element that can emit light signals, such that the second signal is variably and progressively distributed in a light signal emission space, consisting of a ring externally concentric to the call element, over a specific time, the perimeter of said space being filled, as depicted by the arrow, proportionally with respect to the waiting time.

Preferred Embodiment of the Invention

[0030] In view of the described drawings, it can also be seen how in one of the possible embodiments of the invention in the status signaling method proposed by the invention the elevator apparatus comprises:

- a cabin (1) which can move between five floor levels (2, 2', 2"),
- six signaling elements (3, 3', 3", 3"'), with a signaling

element (3, 3', 3") on each floor and a signaling element (3"') inside the cabin (1),
- five call elements (4, 4', 4"), consisting of push-buttons located on floor levels (2, 2', 2"), and
- a door (5, 5', 5") located on each floor level (2, 2', 2"), allowing access from said floor level (2, 2', 2") to the cabin (1).

[0031] According to the invention, the method comprises signaling a standby of the elevator apparatus, in which the elevator apparatus is operative but the cabin (1) is stopped and the doors (5, 5', 5") are closed, by means of the emission, through signaling elements (3, 3', 3", 3"'), of a first signal (s_1) having a intensity that is continuously variable between a maximum level and a minimum level.

[0032] According to a preferred embodiment, each signaling element (3, 3', 3", 3"') comprises a light signal emission element comprising a light signal emission space. As mentioned, there is a signaling element (3, 3', 3") located on each floor level (2, 2', 2") and a signaling element (3"') located inside the cabin (1). The call elements (4, 4', 4") comprise a push-button element incorporating a signaling element (3, 3', 3") in turn comprising a light signal emission element.

[0033] As can be seen in views b)-d) of Figures 1 and 2, with the elevator apparatus being in standby, when a call element (4) located on a first floor level (2) is actuated, the signaling element (3) located on said first floor level (2) begins to emit a second signal (s_2) until the cabin (1) moves and stops on said first floor level (2). The second signal (s_2) can be selected from:

- a signal having a fixed intensity,
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) but with a different tone, and
- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value other than the maximum and minimum levels of the first signal (s_1), and
- a signal having a fixed or variable intensity which is variably distributed in the light signal emission space over a specific time.

[0034] In the situation described in the preceding paragraph, according to a preferred embodiment the signaling element (3"') located inside the cabin (1) goes from emitting the first signal (s_1) to emitting a signal having a fixed intensity, such that it serves as light for the cabin (1).

[0035] As depicted in Figure 3, according to one embodiment of the invention each call element (4, 4', 4") comprises a push-button element incorporating a signaling element (3, 3', 3") that can emit light signals. The second signal (s_2) is variably and progressively distributed in a light signal emission space, consisting of a ring externally concentric to the call element, over a specific time. As depicted by the arrow, the perimeter of the light signal emission space fills up proportionally with respect to the waiting time, as depicted by the sequence of views a)-c). Likewise, though not depicted, said emission space can be circular, coinciding with the push-button element itself, such that said space can be gradually filled up in an upward vertical direction.

[0036] Likewise, as shown in views a) and e) of the embodiment of the method depicted in Figure 2, the variation in intensity between a maximum level and a minimum level of the first signal (s_1) is periodic according to a first period (T_1), where prior to the standby, the elevator apparatus is in an energy-efficient status, which it enters when a time t in which the elevator apparatus is in standby without any call element (4, 4', 4") having been actuated has lapsed, going from the energy-efficient status to standby when a call element (4, 4', 4") is actuated. In said energy-efficient status, the signaling elements (3, 3', 3", 3"') emit a periodic energy-efficient signal (s_0) that can be selected from:

- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value less than the maximum and minimum levels of the first signal (s_1), and
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) but according to an energy-efficient period (T_0) greater than the first period (T_1) of the first signal (s_1).

[0037] A preferred embodiment of said first period (T_1) can be a normal human adult breathing rate, i.e., simulating 12 to 20 breaths or blinks per minute.

[0038] View c) of Figures 1 and 2 depicts a sequence in which the variation in intensity between a maximum level and a minimum level of the first signal (s_1) is periodic according to a first period (T_1), where after the actuation of a call element (4) located on a first floor level (2) and prior to the stopping of the cabin (1) on said first floor level (2), a call element (4') located on a second floor level (2') is actuated, after which the signaling elements (3") located on floor levels (4") other than said first floor level (4) and second floor level (4') begin to emit a periodic third signal (s_3) having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) according to a third period (T_3) less than the first period (T_1). In said situation, according to a preferred embodiment the signaling element (3"') located inside the cabin (1) continues to emit a signal having a fixed intensity.

[0039] As depicted in views d) of Figures 1 and 2, once the cabin (1) has stopped on one of said first floor level (2) or second floor level (2') and moves towards the other of said first floor level (2) and second floor level (2'), the signaling elements (3, 3', 3") located on all floor levels (2, 2', 2"'), except the floor level towards which the cabin (1) is heading, begin to emit the first signal (s_1). Like in the preceding case, according to a preferred embodi-

ment, in said situation the signaling element (3"') located inside the cabin (1) continues to emit a signal having a fixed intensity.

[0040] No signaling element (3, 3', 3", 3"') emits a signal when the elevator apparatus is inoperative.

[0041] In the status signaling system for an elevator apparatus proposed by the invention, the elevator apparatus comprises:

- a cabin (1) which can move between at least two floor levels (2, 2', 2"),
- six signaling elements (3, 3', 3", 3"'),
- a call element (4, 4', 4") located on each floor level (2, 2', 2"), and
- a door (5, 5', 5") located on each floor level (2, 2', 2"), allowing access from said floor level (2, 2', 2") to the cabin (1).

[0042] According to the invention, the signaling elements (3, 3', 3", 3"') can emit a first signal (s_1) having a intensity that is continuously variable between a maximum level and a minimum level when the elevator apparatus is in standby, in which it is operative but the cabin (1) is stopped and the doors (5, 5', 5") are closed. According to the invention, the system comprising the controlling modules, CPUs, for operating the different statuses of the elevator apparatus, as well as the corresponding LED circuits necessary for the signaling elements (3, 3', 3", 3"'), is contemplated.

[0043] According to the drawings, a sequence of operations is as follows. In Figure 1, view a), the elevator apparatus is in the operative status and the cabin (1) is stopped on the fifth floor level (2") without having been called by any user. In said status, the signaling elements (3, 3', 3", 3"') blink according to the first signal (s_1) depicting a standby. In view b), the elevator is called by a first user (A'), such that the signaling element of said floor level (4) emits the second signal (s_2), which can be a steady or continuous light, whereas the remaining floors continue with the first signal (s_1). In view c) the elevator is called by a second user (A") located on another floor, such that the signaling elements (3, 3') of the floors on which the elevator has been called emit the second signal (s_2), and the remaining signaling elements (3") emit a third signal (s_3) having a higher frequency, which indicates that the status of the elevator apparatus is the high traffic status. In view d), the cabin (1) is heading towards the first user (A') after having picked up the second user (A"), such that the situation is similar to that of view b). In the embodiment of the method shown in Figure 2, views b), c), and d) correspond with those of Figure 1, whereas the initial view a) and final view e) of the sequence depict an energy-efficient status. Though not depicted in any of Figures 1 and 2, the invention contemplates that the situation between the situations of views d) and e) of Figure 2 is the one depicted in view a) of Figure 1, and after a certain predetermined time has lapsed, it contemplates proceeding to situation e) of Figure 2.

[0044] In view of this description and set of drawings, the person skilled in the art will be able to understand that the embodiments of the invention that have been described can be combined in a number of ways within the object of the invention. The invention has been described according to preferred embodiments thereof, but for the person skilled in the art it will be evident that a number of variations can be introduced in said preferred embodiments without exceeding the object of the claimed invention.

Claims

1. Status signaling method for an elevator apparatus, where said elevator apparatus comprises:

- at least one cabin (1) which can move between at least two floor levels (2, 2' 2"),
- at least one signaling element (3, 3', 3"),
- at least one call element (4, 4', 4") located on a floor level (2, 2', 2"), and
- at least one door (5, 5', 5") located on a floor level (2, 2', 2"), allowing access from said floor level (2, 2', 2") to said at least one cabin (1),

characterized in that the method comprises signaling a standby of the elevator apparatus, in which the elevator apparatus is operative but said at least one cabin (1) is stopped and said at least one door (5, 5', 5") is closed, by means of the emission, through said at least one signaling element (3, 3', 3"), of a first signal (s_1) having a intensity that is continuously variable between a maximum level and a minimum level.

2. Method according to claim 1, wherein at least one signaling element (3, 3', 3") comprises a light signal emission element comprising a light signal emission space.

3. Method according to claim 2, wherein at least one signaling element (3, 3', 3") is located on a floor level (2, 2', 2").

4. Method according to claim 3, wherein at least one call element (4, 4', 4") comprises a push-button element incorporating a signaling element (3, 3', 3") in turn comprising a light signal emission element.

5. Method according to any of the preceding claims, wherein at least one signaling element (3, 3', 3") comprises a sound signal emission element.

6. Method according to any of claims 2 to 5, wherein with the elevator apparatus being in standby, when a call element (4) located on a first floor level (2) is

actuated, at least one signaling element (3) located on said first floor level (2) begins to emit a second signal (s_2) until said at least one cabin (1) moves and stops on said first floor level (2), where the second signal (s_2) can be selected from:

- a signal having a fixed intensity,
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) but with a different tone, and
- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value other than the maximum and minimum levels of the first signal (s_1).

7. Method according to any of claims 2 to 4, wherein with the elevator apparatus being in standby, when a call element (4) located on a first floor level (2) is actuated, at least one signaling element (3) located on said first floor level (2) begins to emit a second signal (s_2) until said at least one cabin (1) moves and stops on said first floor level (2), where the second signal (s_2) can be selected from:

- a signal having a fixed intensity,
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) but with a different tone,
- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value other than the maximum and minimum levels of the first signal (s_1), and
- a signal having a fixed or variable intensity which is variably distributed in the light signal emission space over a specific time.

8. Method according to any of claims 6 and 7, wherein the variation in intensity between a maximum level and a minimum level of the first signal (s_1) is periodic according to a first period (T_1), where prior to the standby, the elevator apparatus is in an energy-efficient status, which it enters when a time t in which the elevator apparatus is in standby without any call element (4, 4', 4") having been actuated has lapsed, going from the energy-efficient status to standby when a call element (4, 4', 4") is actuated, such that in said energy-efficient status, said at least one signaling element (3, 3', 3") emits a periodic energy-efficient signal (so) that can be selected from:

- a signal having a intensity that is continuously variable between a maximum level and a minimum level having a value less than the maximum and minimum levels of the first signal (s_1), and
- a signal having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) but according to an energy-efficient period (To) greater than the first period (T_1) of the first signal (s_1).

9. Method according to any of claims 6 to 8, wherein the variation in intensity between a maximum level and a minimum level of the first signal (s_1) is periodic according to a first period (T_1), where after the actuation of a call element (4) located on a first floor level (2) and prior to the stopping of said at least one cabin (1) on said first floor level (2), a call element (4') located on a second floor level (2') is actuated, after which the signaling elements (3") located on floor levels (4") other than said first floor level (4) and second floor level (4') begin to emit a periodic third signal (s_3) having a intensity that is continuously variable between the maximum and minimum levels of the first signal (s_1) according to a third period (T_3) different from the first period (T_1).

10. Method according to claim 9, wherein once said at least one cabin (1) has stopped on one of said first floor level (2) or second floor level (2') and moves towards the other of said first floor level (2) and second floor level (2'), the signaling elements (3, 3', 3") located on all the floor levels (2, 2', 2"), except the floor level towards which said at least one cabin (1) is heading, begin to emit the first signal (s_1).

11. Method according to any of the preceding claims, wherein no signaling element (3, 3', 3") emits a signal when the elevator apparatus is inoperative.

12. Status signaling system for an elevator apparatus, where said elevator apparatus comprises:

- at least one cabin (1) which can move between at least two floor levels (2, 2' 2"),
- at least one signaling element (3, 3', 3"),
- at least one call element (4, 4', 4") located on a floor level (2, 2', 2"), and
- at least one door (5, 5', 5") located on a floor level (2, 2', 2"), allowing access from said floor level (2, 2', 2") to said at least one cabin (1),

characterized in that said at least one signaling element (3, 3', 3") can emit a first signal (s_1) having a intensity that is continuously variable between a maximum level and a minimum level when the elevator apparatus is in standby, in which it is operative but said at least one cabin (1) is stopped and the doors (5, 5', 5") are closed.

13. Elevator apparatus comprising a signaling system according to claim 12.

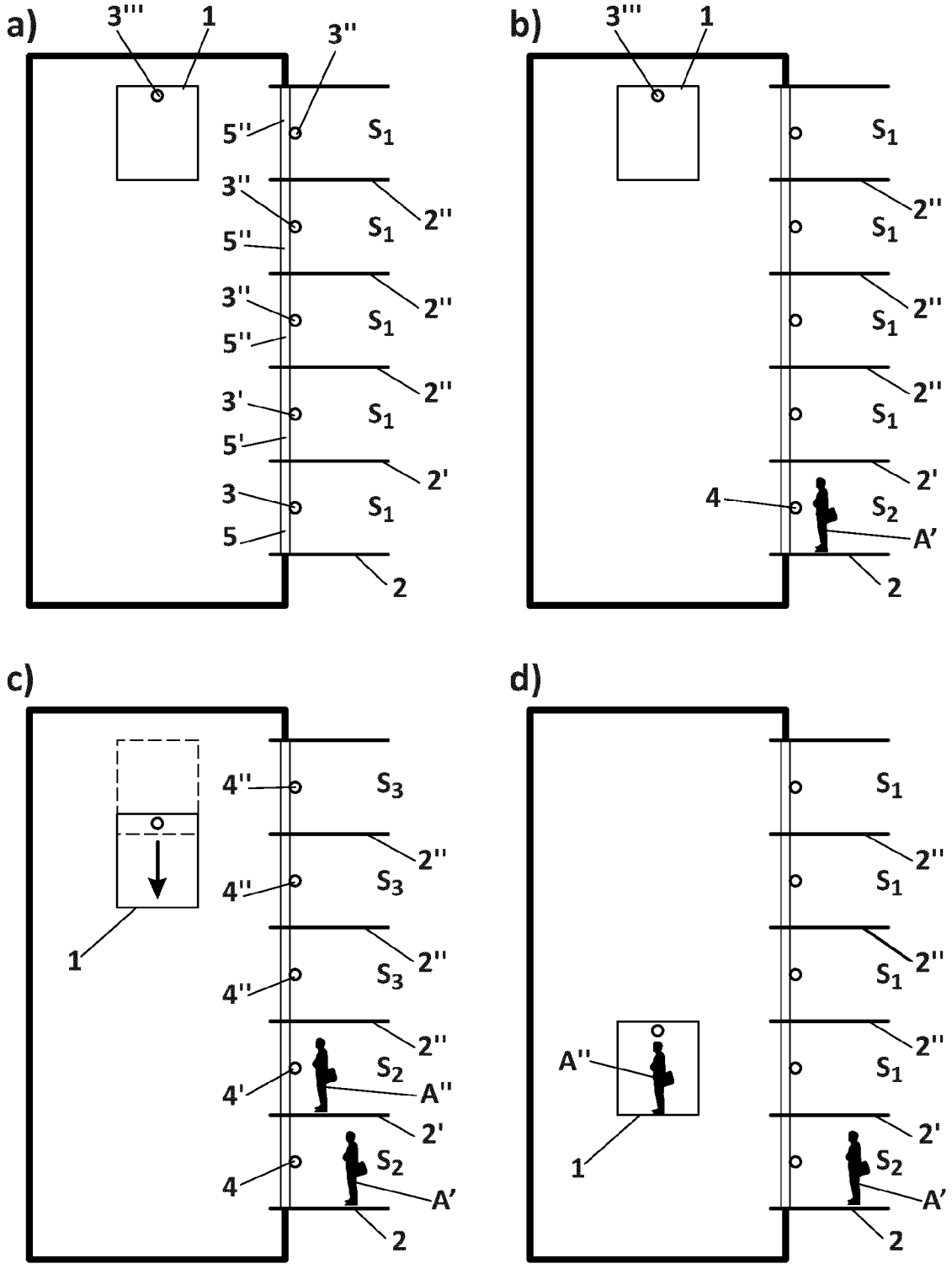

FIG. 1

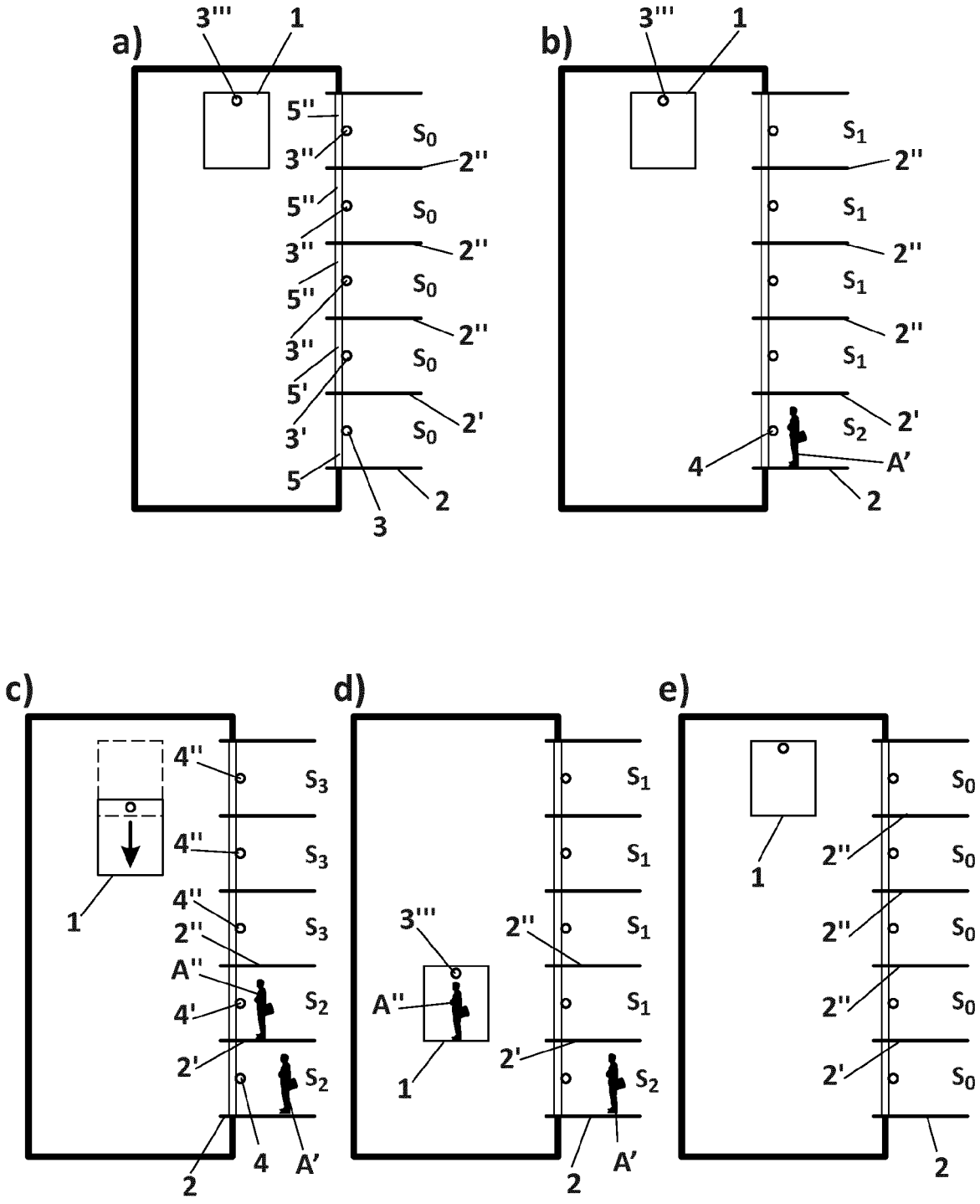

FIG. 2

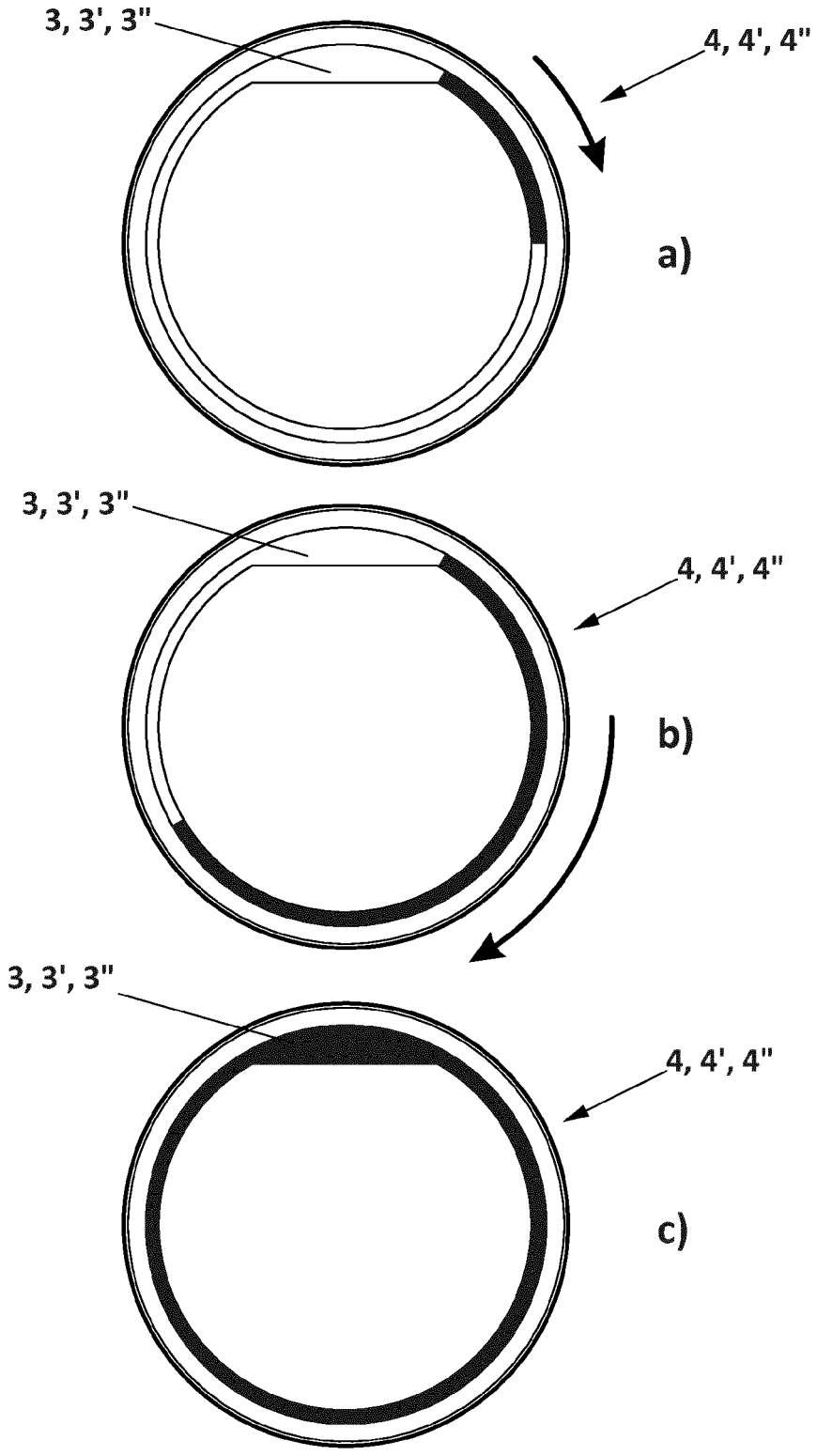

FIG. 3

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EUROPEAN SEARCH REPORT

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EP 15 38 2266

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