

(19)



(11)

EP 2 171 187 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
22.08.2012 Bulletin 2012/34

(21) Application number: **07805708.0**

(22) Date of filing: **12.07.2007**

(51) Int Cl.:
E05B 65/10 ^(2006.01) **E05B 59/00** ^(2006.01)

(86) International application number:
PCT/IT2007/000496

(87) International publication number:
WO 2009/008014 (15.01.2009 Gazette 2009/03)

(54) **Lock for reinforced doors and the like comprising a selector**

Schloss für verstärkte Türen und dergleichen mit einer Wahlvorrichtung

Serrure pour portes renforcées et similaires avec un sélecteur

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE
SI SK TR**

(43) Date of publication of application:
07.04.2010 Bulletin 2010/14

(73) Proprietor: **CISA S.p.A.**
48018 Faenza RA (IT)

(72) Inventors:
• **NALDONI, Maurizio**
I-48018 Faenza (IT)

• **FUSTINI, Fausto**
I-40026 Imola (IT)

(74) Representative: **Modiano, Micaela Nadia et al**
Modiano & Partners (IT)
Via Meravigli, 16
20123 Milano (IT)

(56) References cited:
EP-A- 0 620 341 EP-A- 0 688 930
EP-A- 1 443 163 WO-A-2007/000763
WO-A-2007/065200 GB-A- 2 406 610

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 2 171 187 B1

Description

Technical field

[0001] The present invention relates to a lock for reinforced doors and the like.

Background art

[0002] A reinforced door, typically used as an entrance door for apartments and offices, has suitable laminar reinforcement elements which are designed to provide overall stiffening and make it difficult to damage for break-in purposes.

[0003] For a door of this type, it is necessary to provide components which have the same degree of security against break-ins as the door itself: the hinges will be oversized (in order to bear the great weight of the door and withstand any break-in impacts), and the lock will provide bolts which protrude appropriately and are adapted to engage within respective selvages of the jamb which are particularly deep and rigidly coupled to the wall.

[0004] Locks of this type usually provide for the actuation of the latch by means of a handle (in some cases provided only on the inner side of the door and in other cases on both sides) and of the bolts by turning the key within the cylinder.

[0005] For some kinds of installation it is not possible to adopt this kind of lock, since specific legal requirements prescribe that the exit routes must have antipanic handles installed.

[0006] Known types of embodiment of locks for reinforced doors do not provide for the possibility to retract the bolts by operating the handle (or the panic bar): it must therefore be possible to lock the bolts in a retracted configuration for all the time during which the antipanic function is required (for as long as such enclosed space is occupied by people).

[0007] However, the adoption of this solution is not allowed by many standards, since the safety condition for the user is required to persist constantly.

[0008] There are known types of embodiment which allow to retract the bolts as a consequence of the rotation of the handle: however, these embodiments, by comprising a plurality of mutually associated components, entail the use of a box-like containment body which is very large (much larger than a standard lock for reinforced doors). For this reason, such locks for reinforced doors, suitable for use with an antipanic function, are adapted to be fitted only on doors which are provided specifically in order to contain them.

[0009] An evident problem of all locks which have an antipanic function is that such function makes the lock unsafe in case of theft within the room delimited by the door in which such lock is installed.

[0010] If the thief is able to enter the room (for example through a window), he can exit from the main door (even if the door is closed with multiple turns and therefore with

the bolts fully extracted) because the rotation of the handle with antipanic function entails the retraction of the latch and of the bolts.

[0011] Examples of locks with antipanic function are available from the documents EP-0688930 A2 which discloses a lock according to the preamble of claim 1. Another lock including a selector for the antipanic function is known from the document WO 2007/00763 A1.

Disclosure of the invention

[0012] The aim of the present invention is to provide a lock for reinforced doors and the like comprising an antipanic selector which is suitable for managing the behavior of the lock depending on the type of use which is set by the users themselves.

[0013] Within this aim, an object of the present invention is to provide a lock for reinforced doors and the like comprising an antipanic selector which has a low cost, is relatively simple to provide in practice, and safe in application.

[0014] This aim and this object, as well as others which will become better apparent hereinafter, are achieved by a lock for reinforced according to the present invention, that has the doors and the like, according to the present invention, that has the features set forth in claim 1.

Brief description of the drawings

[0015] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of a lock for reinforced doors and the like, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a partially sectional perspective view of a lock, according to the present invention, for reinforced doors and the like provided with a selector in the configuration for enabling the antipanic function; Figure 2 is a partially sectional perspective view of a lock, according to the invention, for reinforced doors and the like which is provided with a selector in the configuration for enabling the antipanic function;

Figure 3 is a partially sectional perspective view of a lock, according to the invention, for reinforced doors and the like which is provided with a selector in the configuration for disabling the antipanic function;

Figure 4 is a partially sectional perspective view of a lock according to the invention, for reinforced doors and the like provided with a selector in the configuration for disabling the antipanic function.

Ways of carrying out the invention

[0016] With reference to the figures, the reference nu-

meral 1 generally designates a lock for reinforced doors and the like.

[0017] The lock 1 for reinforced doors suitable for fitting a selector comprises a box-like containment body 2: the body 2 is substantially shaped like a parallelepiped, with two mutually opposite faces 3 which have a large surface and four lateral edges, an upper one 4, a lower one 5, a front one 6 and a rear one (not shown in the figure). The box-like body 2 can be provided by adopting the standard size specifications for this type of lock, with the advantage that it can be installed in any reinforced door without requiring any modification thereof.

[0018] The box-like body 2 is provided with suitable lateral openings 7 for the passage of at least one latch (not shown in the figure) and of at least one bolt 8: according to the embodiment shown in the figure, the at least one bolt 8 is constituted by four cylindrical elements, which are arranged parallel to each other and can slide transversely with respect to the lock. There are embodiments which adopt additional bolts which protrude from the upper edge 4 and from the lower edge 5 for association with link rods which are adapted to actuate pins which perform a translational motion with respect to the door and are arranged at any distance from the lock.

[0019] A plurality of substantially laminar elements are accommodated within the box-like body 2 and are functionally associated with a cylinder (only a seat 9 of which is visible in the figure), which is actuated by a respective key.

[0020] A rotating element (not shown in the figure) is also present within the body 2 for engaging a handle: said element is associated with the at least one latch by means of suitable lever systems of a known type which are designed to move said latch.

[0021] The lock further comprises a translational plate 10, which is functionally associated in an upper region with the rotating element and, in a lower region, with a laminar element 11, which is rigidly coupled to the bolts 8 by means of a carousel 12 which is pivoted, in another point, to the box-like body 2.

[0022] The selector comprises a translational assembly 13, which can move between two extreme configurations by user selection and is rigidly coupled to a plate 14 for coupling the laminar element 11 to the carousel 12.

[0023] The plate 14 is functionally associated with the rotating element and can perform a translational motion as a consequence of rotations of the handle within said element: in practice, each rotation of the handle entails a translational motion of the plate 14. When the plate 14 is coupled to the carousel 12, a movement thereof leads to a rotation of the carousel 12 and therefore to a retraction of the element 11, i.e., a retraction of the bolts 8.

[0024] In the first extreme configuration of the assembly 13 (which can be seen in Figures 1 and 2), the carousel 12 is pivoted to the plate 14 and therefore rigidly coupled to the element 11, and in the second extreme configuration (which can be seen in Figures 3 and 4) the carousel 12 and the plate 14 are separate and independ-

ent.

[0025] The translational assembly 13 comprises a bracket 13a which is provided with suitable slots 15 for accommodating pins 16 which are rigidly coupled to the body 2.

[0026] The slots 15 and the pins 16 are adapted to guide the bracket 13a during translational motion between the extreme configurations: in this manner, as can be seen clearly by viewing the figures, the plate 14 can move along a preset direction (vertically according to the figures) with a stroke whose maximum extent is equal to the length of the slots 15.

[0027] The assembly 13 is functionally associated with an actuation element 17, which can be actuated from the outside, even indirectly, and is designed to move it between the extreme configurations.

[0028] In particular, according to the embodiment shown in the figure, the actuation element 17 comprises a rotating plug 18, which can be accessed from the outside through an opening 19 of the box-like body 2 (according to the embodiment shown in the figure, the opening 19 is in the front edge 6).

[0029] The plug 18 has its end 20 directed toward the inside of the body 2 which is shaped appropriately and in direct contact with a protrusion 21 which is rigidly coupled to the bracket 13a.

[0030] The contour of the end 20 determines the position of the bracket 13a in accordance with the angular position of the plug 18, and therefore the mutual coupling and uncoupling condition of the plate 14 and the carousel 12.

[0031] According to an alternative embodiment, the actuation element 17 comprises a sliding block, which can be accessed from the outside through an opening of the box-like body 2. In said sliding block, the end directed toward the inside of the body 2 is associated with the bracket 13a and the translational motion of the block determines the position of the bracket 13a and therefore the mutual coupling and uncoupling condition of the plate 14 and the carousel 12.

[0032] It is also possible to provide an embodiment in which the actuation element 17 is electromechanical: in this case, it comprises an actuator which is controlled, optionally even remotely, by a switch which has an end of the movable element coupled to the bracket 13a for its translational motion, thus determining the mutual coupling and uncoupling condition of the plate 14 and the carousel 12.

[0033] It is optionally also possible to provide an actuation element 17 which comprises an oscillating block, which can be accessed from the outside through an opening of the box-like body 2 and whose surface is directed toward the inside of the body 2 associated with the bracket 13a.

[0034] The rotation of the block with respect to the pivoting axis, in this case, determines the position of the bracket 13a and therefore the mutual coupling and uncoupling condition of the plate 14 and the carousel 12:

to the user, the oscillating block has the appearance of a switch, which can be arranged in two different configurations (with an appearance which is entirely similar to a switch of the type used in electrical systems).

[0035] The plate 14 for coupling to the carousel 12 comprises an open slot 22, which faces and is proximate to a pin 23 which is rigidly coupled to the carousel 12.

[0036] The pin 23 is accommodated within the slot 22 in one of said extreme configurations of the assembly 13 and is instead outside it in the other extreme configuration.

[0037] The operation of the selector according to the invention is as follows.

[0038] While keeping the actuation element 17 in a position which corresponds to a first extreme configuration, the bracket 13a is made to perform a translational motion toward the upper edge 4 of the body 2. In such conditions, the plate 14 also is raised and therefore the pin 23 lies outside the slot 22: the carousel 12 and the plate 14 are mutually uncoupled, and the carousel 12 can move freely; in this configuration, the lock does not perform the antipanic function and the bolts 8 can be retracted only by actuating the cylinder with the respective key. A movement of the handle, despite entailing a corresponding movement of the plate 14, is in fact not transmitted to the carousel 12, because these two elements are not mutually coupled.

[0039] When the actuation element 17 is arranged so as to determine the second extreme configuration, the bracket 13a is made to perform a translational motion toward the lower edge 5 of the body 2. In such conditions, the plate 14 also is lowered and therefore the pin 23 lies within the slot 22: the carousel 12 and the plate 14 are mutually coupled and the carousel 12 can move only rigidly with the plate 14; in this configuration, the lock performs the antipanic function and the bolts 8 can be retracted by simply actuating the handle. A movement of the handle in fact entails a corresponding movement of the plate 14, which is transmitted to the carousel 12 because these two elements are mutually coupled. The carousel 12 causes the retraction of the element 11 and therefore of the bolts 8.

[0040] It has thus been shown that the invention achieves the intended aim and objects therefore

[0041] The invention thus conceived is therefore susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

Claims

1. A lock for reinforced doors and the like, comprising a box-like containment body (2) which has suitable lateral openings (7) for the passage of at least one latch and at least one bolt (8), said box-like containment body (2) accommodating a plurality of substantially laminar elements which are functionally associated with a cylinder, which is actuated by a respec-

tive key, and a rotating element for engagement of a handle, which is associated with said at least one latch by means of lever systems and is designed to move the latch, and comprising a translational plate (10) which performs a translational motion and is functionally associated, in an upper region, with said rotatable element and, in a lower region, with a laminar element (11), which is rigidly coupled to the bolt (8) by means of a carousel (12) which is pivoted, in another point, to said containment box-like body (2), **characterized in that** it comprises a selector that comprises a translational assembly (13), which can move between two extreme configurations upon selection by the user and is rigidly coupled to a plate (14) for coupling to the carousel (12), said plate (14) being functionally associated with said rotating element and translatable as a consequence of rotations of the handle within said rotating element, in the first extreme configuration of said translational assembly (13) said carousel (12) being pivoted to said plate (14) and being therefore rigidly coupled to said laminar element (11) and in the second extreme configuration said carousel (12) and said plate (14) being separate and independent.

2. The lock according to claim 1, **characterized in that** said translational assembly (13) comprises a bracket (13a) which is provided with suitable slots (15) for accommodating pins (16) which are rigidly coupled to the body (2), said slots (15) and said pins (16) being adapted to guide said bracket (13a) during the translational motion between said extreme configurations.
3. The lock according to claim 2, **characterized in that** said translational assembly (13) is functionally associated with an actuation element (17) which can be actuated from the outside even indirectly and is designed to move it between said extreme configurations.
4. The lock according to claim 3, **characterized in that** said actuation element (17) comprises a rotating plug (18), which can be accessed from the outside through an opening (19) of said box-like body (2), the end (20) of which is directed toward the inside of the body (2) and is conveniently shaped and in direct contact with a protrusion (21) which is rigidly coupled to said bracket (13a), the contour of the end (20) determining the position of said bracket (13a), in accordance with the angular position of said plug (18) and therefore the mutual coupling and uncoupling condition of the plate (14) and the carousel (12).
5. The lock according to claim 3, **characterized in that** said actuation element (17) comprises a sliding block which can be accessed from the outside through an opening of said box-like body (2), in which the end

that is directed toward the inside of the body (2) is associated with said bracket (13a), the translational motion of the block determining the position of said bracket (13a) and therefore the mutual coupling and uncoupling condition of the plate (14) and the carousel (12).

6. The lock according to claim 3, **characterized in that** said actuation element (17) comprises an actuator which is controlled, optionally even remotely, by a switch, in which an end of the movable element mates with said bracket (13a) for its translational motion, thus determining the mutual coupling and uncoupling condition of the plate (14) and the carousel (12).
7. The lock according to claim 3, **characterized in that** said actuation element (17) comprises an oscillating block which can be accessed from the outside through an opening of said box-like body (2), in which the surface directed toward the inside of the body (2) is associated with said bracket (13a), the rotation of the block with respect to the pivoting axis determining the position of said bracket (13a) and thus the mutual coupling and uncoupling condition of the plate (14) and the carousel (12).
8. The lock according to one or more of the preceding claims, **characterized in that** said plate (14) for coupling to the carousel (12) comprises an open slot (22), which faces and is proximate to a pin (23) which is rigidly coupled to said carousel (12), said pin (23) being accommodated within said slot (22) in one of said extreme configurations of said assembly (13) and being external thereto in the other extreme configuration.

Patentansprüche

1. Ein Schloss für verstärkte Türen und dergleichen, das einen kastenähnlichen Behälterkörper (2) umfasst, der geeignete seitliche Öffnungen (7) zum Hindurchführen mindestens einer Klinke und mindestens eines Bolzens (8) hat, wobei der kastenähnliche Behälterkörper (2) eine Vielzahl im Wesentlichen laminarer Elemente aufnimmt, die funktionell mit einem Zylinder verbunden sind, welcher mit einem entsprechenden Schlüssel betätigt wird, und ein sich drehendes Element für den Eingriff eines Griffs, welcher mit der mindestens einen Klinke durch Hebelsysteme verbunden und konstruiert ist, um die Klinke zu bewegen, und eine Translationsplatte (10) umfassend, die eine Translationsbewegung durchführt und in einem oberen Bereich funktionell mit dem drehbaren Element und in einem unteren Bereich mit einem laminaren Element (11) verbunden ist, welches über ein Karussell (12) starr mit

dem Bolzen (8) gekoppelt ist, das an einem anderen Punkt drehgelenkig mit dem kastenähnlichen Behälterkörper (2) verbunden ist, **dadurch gekennzeichnet, dass** es einen Selektor umfasst, der einen Translationsaufbau (13) umfasst, welcher sich nach Auswahl durch den Bediener zwischen zwei extremen Anordnungen bewegen kann und zur Kopplung mit dem Karussell (12) starr mit einer Platte (14) gekoppelt ist, wobei die Platte (14) funktionell mit dem sich drehenden Element verknüpft ist und infolge von Drehungen des Griffs in dem sich drehenden Element eine Translationsbewegung durchführen kann, wobei in der ersten extremen Anordnung des Translationsaufbaus (13) das Karussell (12) drehgelenkig mit der Platte (14) verbunden und daher starr mit dem laminaren Element (11) gekoppelt ist und in der zweiten extremen Anordnung das Karussell (12) und die Platte (14) getrennt und unabhängig sind.

2. Das Schloss gemäß Anspruch 1, **dadurch gekennzeichnet, dass** der Translationsaufbau (13) einen Arm (13a) umfasst, der mit geeigneten Schlitzen (15) zur Aufnahme von Stiften (16) ausgestattet ist, welche starr mit dem Körper (2) gekoppelt sind, wobei die Schlitze (15) und die Stifte (16) ausgebildet sind, um den Arm (13a) während der Translationsbewegung zwischen den extremen Anordnungen zu führen.
3. Das Schloss gemäß Anspruch 2, **dadurch gekennzeichnet, dass** der Translationsaufbau (13) funktionell mit einem Betätigungselement (17) verknüpft ist, das selbst indirekt von außen betätigt werden kann und konstruiert ist, um ihn zwischen den extremen Anordnungen zu bewegen.
4. Das Schloss gemäß Anspruch 3, **dadurch gekennzeichnet, dass** das Betätigungselement (17) einen Drehstöpsel (18) umfasst, auf den von außen durch eine Öffnung (19) des kastenähnlichen Körpers (2) zugegriffen werden kann und dessen Ende (20) zur Innenseite des Körpers (2) hin gerichtet und praktisch geformt ist und in direktem Kontakt mit einem Vorsprung (21) steht, der starr mit dem Arm (13a) gekoppelt ist, wobei die Kontur des Endes (20) die Position des Arms (13a) entsprechend der Winkelposition des Stöpsels (18), und somit den gegenseitigen Kopplungs- und Entkopplungszustand der Platte (14) und des Karussells (12), bestimmt.
5. Das Schloss gemäß Anspruch 3, **dadurch gekennzeichnet, dass** das Betätigungselement (17) eine Gleitblock umfasst, auf die von außen durch eine Öffnung des kastenähnlichen Körpers (2) zugegriffen werden kann, wobei das Ende, das zur Innenseite des Körpers (2) hin gerichtet ist, mit dem Arm (13a) verknüpft ist, wobei die Translationsbewegung des Blocks die Position des Arms (13a) und somit

den gegenseitigen Kopplungs- und Entkopplungszustand der Platte (14) und des Karussells (12) bestimmt.

6. Das Schloss gemäß Anspruch 3, **dadurch gekennzeichnet, dass** das Betätigungselement (17) ein Betätigungsglied umfasst, das, selbst durch Fernsteuerung, durch einen Schalter gesteuert wird, wobei ein Ende des beweglichen Elements sich mit dem Arm (13a) zum Zwecke seiner Translationsbewegung verbindet, wodurch der gegenseitige Kopplungs- und Entkopplungszustand der Platte (14) und des Karussells (12) bestimmt wird.
7. Das Schloss gemäß Anspruch 3, **dadurch gekennzeichnet, dass** das Betätigungselement (17) einen Oszillationsblock umfasst, auf den von außen durch eine Öffnung des kastenähnlichen Körpers (2) zugegriffen werden kann, wobei die Oberfläche, die zur Innenseite des Körpers (2) hin gerichtet ist, mit dem Arm (13a) verknüpft ist, wobei die Drehung des Blocks im Verhältnis zur Drehachse die Position des Arms (13a) und somit den gegenseitigen Kopplungs- und Entkopplungszustand der Platte (14) und des Karussells (12) bestimmt.
8. Das Schloss gemäß einem oder mehreren der obigen Ansprüche, **dadurch gekennzeichnet, dass** die Platte (14) zur Kopplung mit dem Karussell (12) einen offenen Schlitz (22) umfasst, der einem Stift (23) gegenüberliegt und benachbart ist, welcher starr mit dem Karussell (12) gekoppelt ist, wobei der Stift (23) in einer der extremen Anordnungen des Aufbaus (13) in dem Schlitz (22) untergebracht und in der anderen extremen Anordnung extern dazu ist.

Revendications

1. Serrure pour portes renforcées et analogues, comportant un corps de logement (2) en forme de boîtier possédant des ouvertures latérales appropriées (7) pour le passage d'au moins un loquet et d'au moins un pêne (8), ledit corps de logement (2) en forme de boîtier contenant une pluralité d'éléments sensiblement laminaires coopérant avec un cylindre, lequel est actionné par une clef respective, et un élément rotatif pour l'engagement d'une poignée, qui est associé audit au moins un loquet à l'aide de systèmes de leviers et est conçu pour faire bouger le loquet, et comprenant une plaque à translation (10) qui effectue un mouvement de translation et coopère, dans une partie supérieure, avec ledit élément rotatif et, dans une partie inférieure, avec un élément laminaire (11) solidaire du pêne (8) à l'aide d'un carrousel (12) qui pivote, en un autre point, par rapport audit corps de logement (2) en forme de boîtier, **caractérisée en ce qu'elle** comporte un sélecteur qui com-

prend un dispositif de translation (13), lequel peut bouger entre deux configurations extrêmes au gré de l'utilisateur et fait corps avec une plaque (14) pour s'unir au carrousel (12), ladite plaque (14) coopérant avec ledit élément rotatif et pouvant bouger par suite de rotations de la poignée dans ledit élément rotatif, dans la première configuration extrême dudit dispositif de translation (13) ledit carrousel (12) étant amené à pivoter par rapport à ladite plaque (14) et faisant donc corps avec ledit élément laminaire (11) et, dans la seconde configuration extrême, ledit carrousel (12) et ladite plaque (14) étant séparés et indépendants.

2. Serrure selon la revendication 1, **caractérisée en ce que** ledit dispositif de translation (13) comprend une ferrure (13a) pourvue de fentes appropriées (15) destinées à recevoir des goupilles (16) solidaires du corps (2), lesdites fentes (15) et lesdites goupilles (16) servant à guider ladite ferrure (13a) pendant le mouvement de translation entre lesdites configurations extrêmes.
3. Serrure selon la revendication 2, **caractérisée en ce que** ledit dispositif de translation (13) coopère avec un élément d'actionnement (17) actionnable, même indirectement, de l'extérieur et conçu pour le faire bouger entre lesdites configurations extrêmes.
4. Serrure selon la revendication 3, **caractérisée en ce que** ledit élément d'actionnement (17) comprend une pointe rotative (18) accessible de l'extérieur à travers une ouverture (19) dudit corps (2) en forme de boîtier, dont l'extrémité (20) est orientée vers l'intérieur du corps (2) et a une forme adéquate et se trouve directement au contact d'une saillie (21) solidaire de ladite ferrure (13a), le profil de l'extrémité (20) déterminant la position de ladite ferrure (13a) en fonction de la position angulaire de ladite pointe (18) et par conséquent l'état de réunion et de séparation mutuelles de la plaque (14) et du carrousel (12).
5. Serrure selon la revendication 3, **caractérisée en ce que** ledit élément d'actionnement (17) comprend un bloc coulissant accessible de l'extérieur à travers une ouverture dudit corps (2) en forme de boîtier, dans laquelle l'extrémité orientée vers l'intérieur du corps (2) est associée à ladite ferrure (13a), le mouvement de translation du bloc déterminant la position de ladite ferrure (13a) et donc l'état de réunion et de séparation mutuelles de la plaque (14) et du carrousel (12).
6. Serrure selon la revendication 3, **caractérisée en ce que** ledit élément d'actionnement (17) comprend un actionneur commandé, éventuellement même distance, par un commutateur, dans laquelle une ex-

trémité de l'élément mobile s'associe avec ladite ferrure (13a) pour son mouvement de translation, déterminant ainsi l'état de réunion et de séparation mutuelles de la plaque (14) et du carrousel (12).

5

7. Serrure selon la revendication 3, **caractérisée en ce que** ledit élément d'actionnement (17) comprend un bloc oscillant accessible de l'extérieur à travers une ouverture dudit corps (2) en forme de boîtier, dans laquelle la surface orientée vers l'intérieur du corps (2) est associée ladite ferrure (13a), la rotation du bloc par rapport à l'axe de pivotement déterminant la position de ladite ferrure (13a) et ainsi l'état de réunion et de séparation mutuelles de la plaque (14) et du carrousel (12).

10

15

8. Serrure selon une ou plusieurs des revendications précédentes, **caractérisée en ce que** ladite plaque (14) à réunir au carrousel (12) comprend une fente ouverte (22), qui est en regard et tout près d'une goupille (23) solidaire dudit carrousel (12), ladite goupille (23) étant reçue dans ladite fente (22) dans l'une desdites configurations extrêmes dudit dispositif (13) et se trouvant hors de celle-ci dans l'autre configuration extrême.

20

25

30

35

40

45

50

55

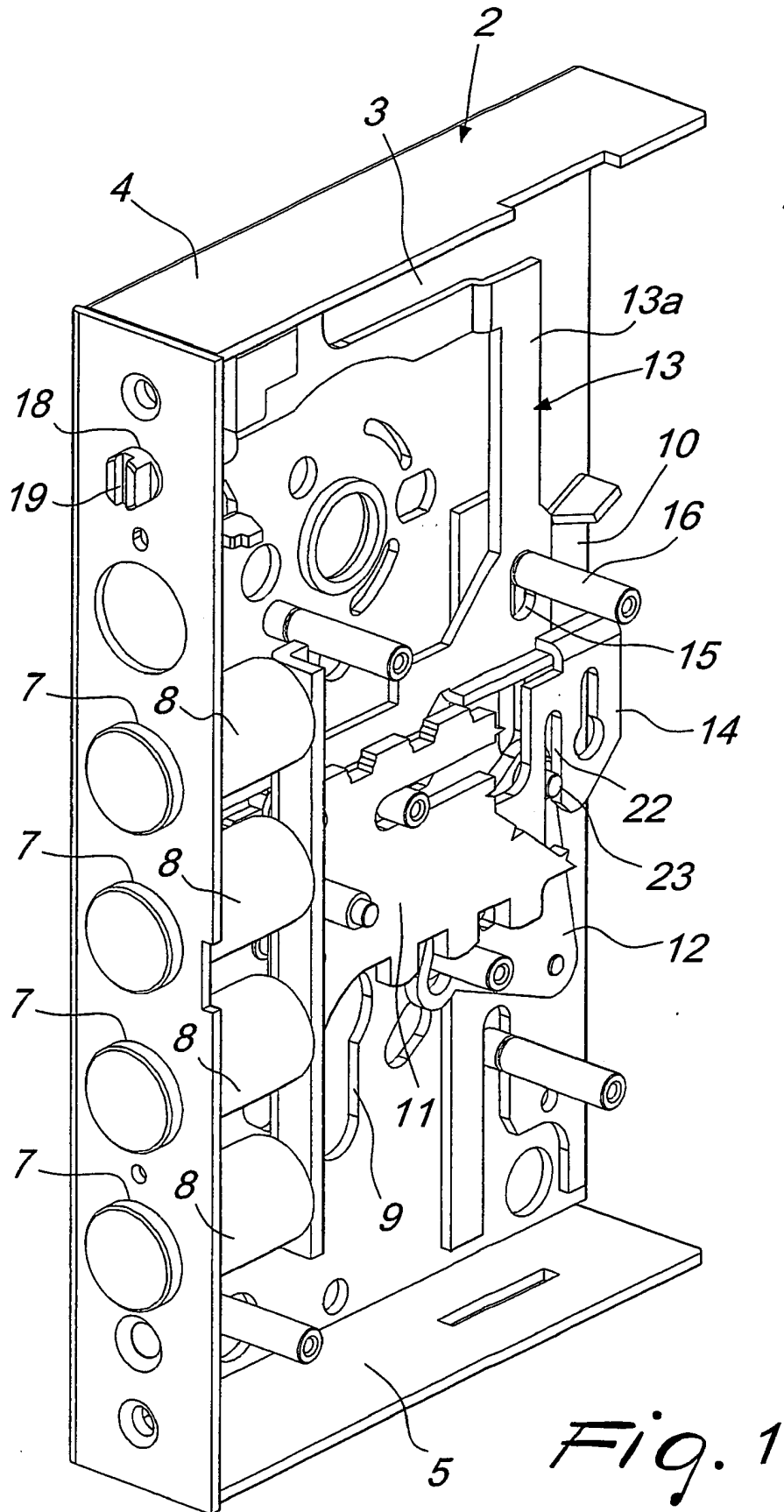
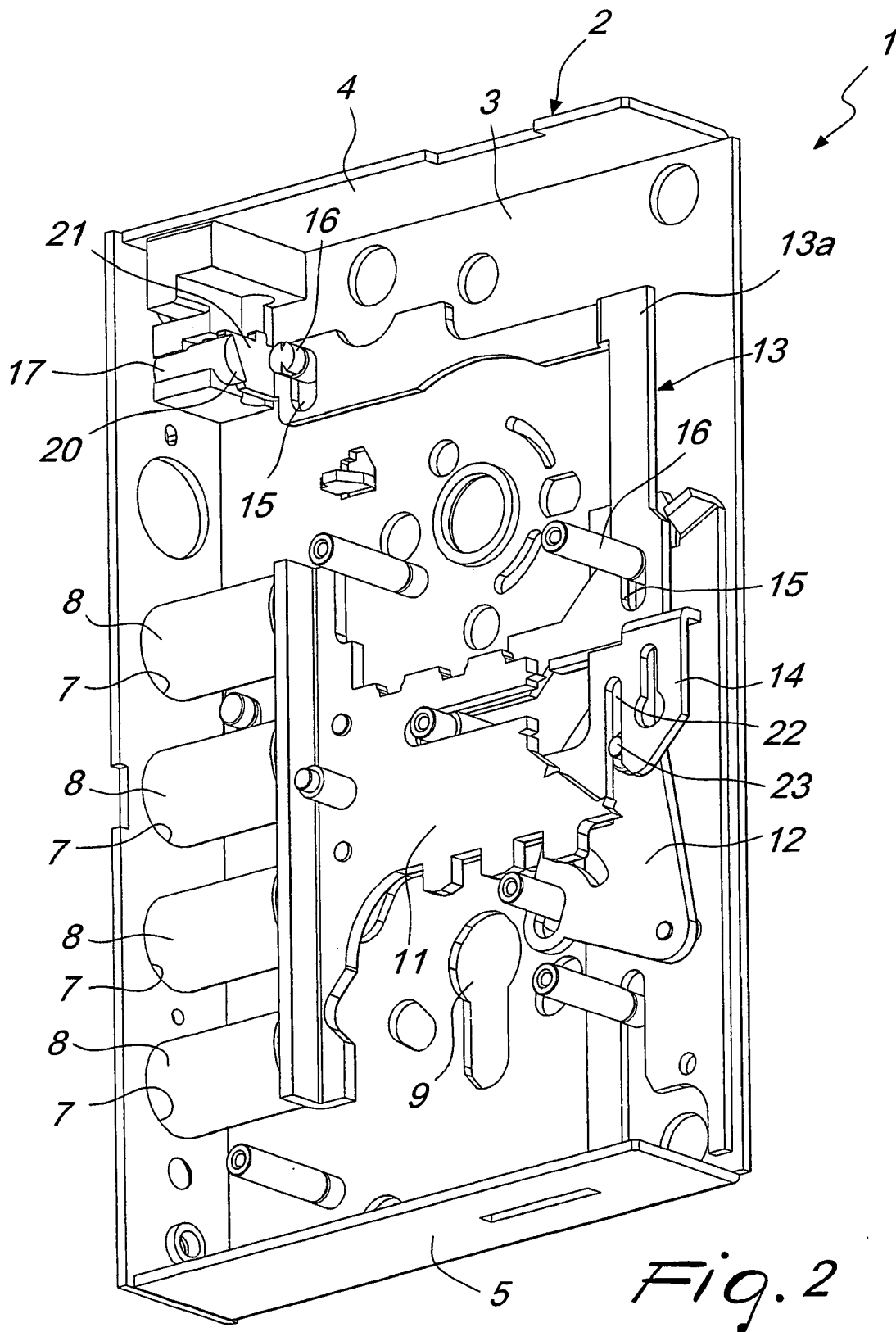
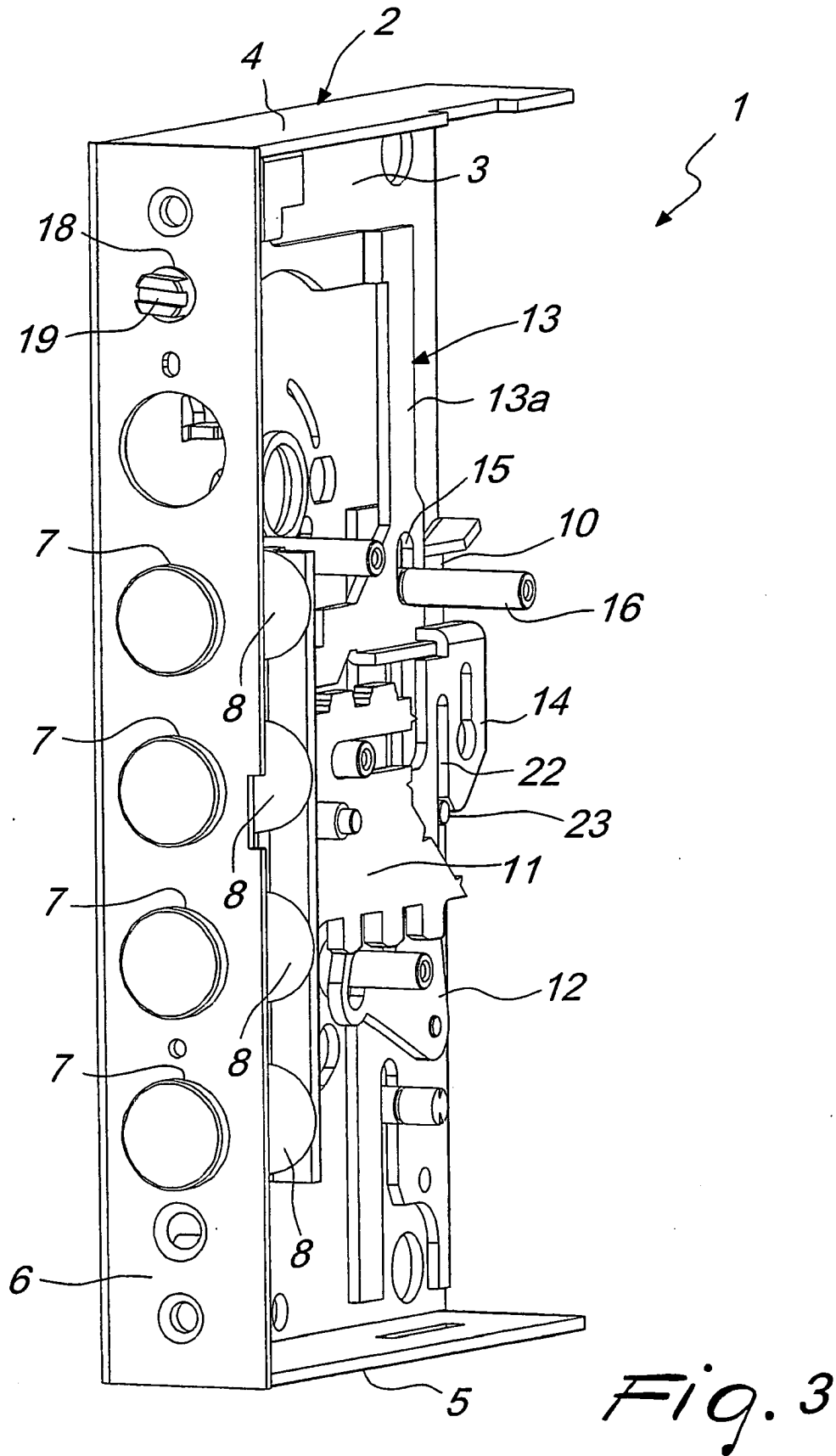
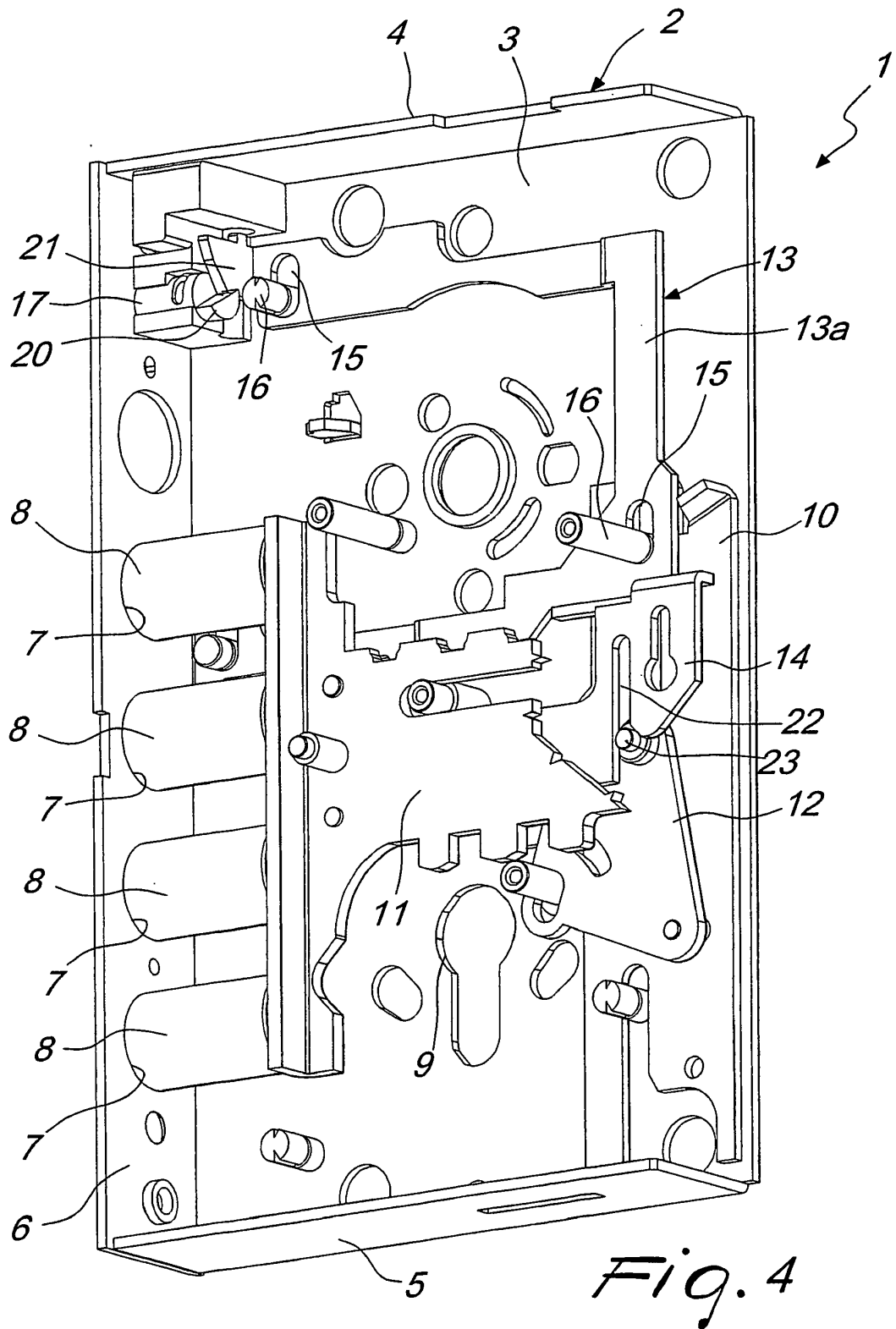


Fig. 1







REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- EP 0688930 A2 [0011]
- WO 200700763 A1 [0011]