



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.08.2009 Bulletin 2009/33

(51) Int Cl.:
E05B 65/08 (2006.01)

(21) Application number: **09151867.0**

(22) Date of filing: **02.02.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA RS

(30) Priority: **05.02.2008 IT PD20080038**

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(54) **Lock particularly for sliding doors and the like**

(57) A lock (10), particularly for sliding doors (11) and the like, which comprises a latch (12) supported so that it can slide and rotate by a main body (13) that is associated with a leaf (14) and accommodates means (15) for actuating the latch (12), which can be operated by the user to pass

- from a first configuration, in which the latch (12) is substantially retracted into the main body (13),
- to a second configuration, in which the latch (12) is extracted from the main body (13),
- and vice versa.

The latch (12) comprises an element (16) for marking by striking a jamb (17) that supports an element (18) for retaining the latch (12).

On the jamb (17) there is a hole (19), which has a substantially circular cross-section with its axis (A) aligned with the marking element (16) when the latch (12) is in the second configuration. A contrast plate (20), which partially covers the hole (19) and is provided with the retention element (18), is associated with the jamb (17).

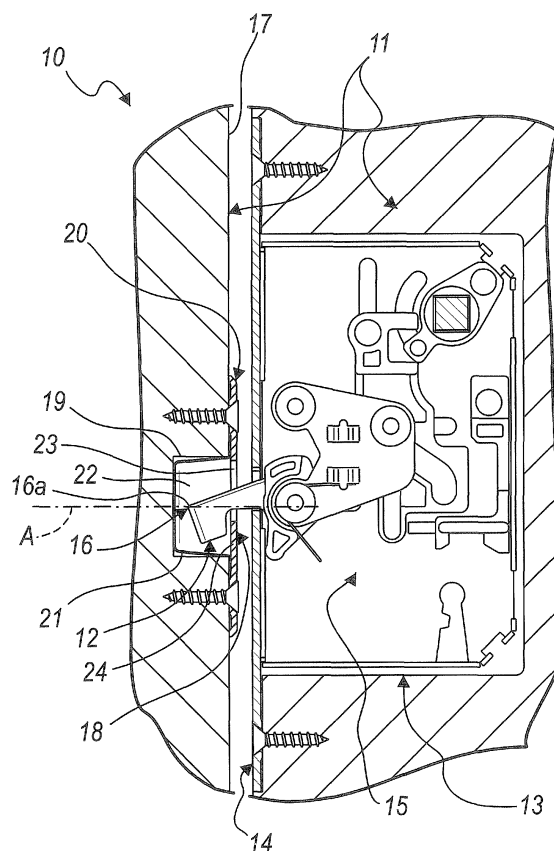


Fig. 1

Description

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

[0002] Locks for sliding doors are currently known which have a latch that is supported, so that it can slide and rotate, by a main body that is associated with a leaf of the door.

[0003] The main body accommodates means for actuating the latch which can be operated by the user to pass

- from a first configuration, in which the latch is substantially retracted into the main body,
- to a second configuration, in which the latch is extracted from the main body,
- and vice versa.

In the transition from the first configuration to the second configuration, the latch, which is hook-shaped, performs a translational motion, sliding toward the outside of the main body, then turns so as to engage a retention element provided on the jamb. This retention element is formed generally by a flap of a contrast plate, which partially covers the latch insertion hole provided in the jamb.

Currently, this hole is provided on the jamb substantially at the latch.

A contrast plate is arranged on the hole, has an opening for the passage of the latch and has the retention element, which is formed substantially by a flap of the contrast plate that lies perimetrically with respect to the opening.

In order to obviate any mistakes in assessing the position of the hole, the contrast plate has, on the jamb, at the latch, notches for alignment with corresponding notches provided on a plate that covers the main body of the lock.

By aligning the notches of the contrast plate with those on the plate, the retention element of the latch is positioned correctly on the hole, having a latch insertion opening aligned with it, in order to ensure correct engagement of the latch with the retention element.

This type of lock substantially has the drawback that it requires the provision, on the jamb, of a latch insertion hole that is larger than the space occupation of the latch, in order to allow flexibility in adapting to the installation conditions.

In this manner, the hole in fact has a certain dimensional tolerance that allows to accommodate the latch even in installation conditions that do not correspond perfectly to the expected conditions.

Thus, the hole is provided with an elongated shape so as to obviate any errors in estimating the matching position of the latch on the jamb when the sliding door is installed.

This type of hole therefore has the shape of an elongated slot and is provided during the provision of the

jamb.

Currently, the need is felt for a lock that does not require the provision of the latch insertion hole during the provision of the jamb, but allows to provide it during the installation of the lock, ensuring an efficiency of the lock that is at least equal to currently known locks.

The aim of the present invention is to provide a lock that meets the above need, allowing to provide the latch insertion hole during the installation of the lock easily and precisely.

Within this aim, an object of the invention is to provide a lock that allows to avoid adaptations of the contrast plate for covering the latch insertion hole with respect to the covering plate of the main body.

Another object of the invention is to provide a lock that is simple and easy to use and can be manufactured with low costs.

This aim, as well as these and other objects that will become better apparent hereinafter, are achieved by a lock, particularly for sliding doors and the like, which comprises a latch supported so that it can slide and rotate by a main body that is associated with a leaf and accommodates means for actuating said latch, which can be operated by the user to pass

- from a first configuration, in which said latch is substantially retracted into said main body,
- to a second configuration, in which said latch is extracted from said main body,
- and vice versa,

characterized in that said latch comprises an element for marking by striking a jamb that supports an element for retaining said latch, on said jamb there being a hole which has a substantially circular cross-section with its axis aligned with said marking element when said latch is in said second configuration, a contrast plate, which partially covers said hole and is provided with said retention element, being associated with said jamb, said latch, in said second configuration, inserted in said hole, being engaged with said retention element to prevent the spacing of said leaf from said jamb.

[0004] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of the lock according to the invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a sectional view of a lock according to the invention in a configuration for closing the door; Figure 2 is a sectional view of the lock according to the invention in a configuration for opening the door; Figure 3 is a sectional view of the lock according to the invention during a step of installation on the door.

[0005] It is noted that anything found to be already known during the patenting process is understood not to

be claimed and to be the subject of a disclaimer.

[0006] With reference to the figures, the reference numeral 10 generally designates a lock, particularly for sliding doors 11 and the like, which comprises a latch 12 that is supported, so that it can slide and rotate, by a main body 13.

[0007] The main body 13 is associated with a leaf 14 and accommodates means 15 for actuating the latch 12, which can be operated by the user to pass

- from a first configuration, in which the latch 12 is substantially retracted into the main body 13,
- to a second configuration, in which the latch 12 is extracted from the main body 13,
- and vice versa.

[0008] A particularity of the lock 10 is that the latch 12 comprises an element 16 for marking by striking a jamb 17 that supports a retention element 18 for the latch 12.

[0009] A hole 19 is provided on the jamb 17 and has a substantially circular cross-section with an axis A that is aligned with the marking element 16 when the latch 12 is in the second configuration.

[0010] There is also a contrast plate 20, which covers the hole 19 partially, is provided with the retention element 18 and is associated with the jamb 17.

[0011] The latch 12, in the second configuration, is inserted in the hole 19 and is engaged with the retention element 18 in order to prevent the spacing of the leaf 14 from the jamb 17, i.e., the opening of the sliding door.

[0012] Advantageously, the latch 12 has a pointed nose 16a, which forms the marking element 16.

[0013] Further, the lock 10 conveniently comprises a cup-shaped element 21 that is inserted in the hole 19 to form a compartment 22 for accommodating the latch 12.

[0014] Conveniently, the hole 19 is a cylindrical dead hole provided by drilling the jamb 17.

[0015] The contrast plate 20 advantageously has an opening 23 for inserting the latch 12 in the hole 19, the retention element 18 being formed by a flap 24 of the contrast plate 20 that is perimetric with respect to the opening 23.

[0016] The use of the lock 10 according to the invention is as follows.

[0017] The main body 13 is associated with a leaf 14 of the sliding door 11 and then, once the latch 12 has been extracted into the second configuration, the leaf 14 is pushed against the jamb 17 so that the latch 12 marks it with a notch B at its pointed nose 16a.

[0018] The hole 19 for inserting the latch 12 on the jamb 17 is then provided by drilling, centering the drilling bit on the notch provided in the jamb 17.

[0019] In this manner, the compartment 22 for accommodating the latch 12, in which the cup-shaped element 21 is thus inserted, is provided.

[0020] The contrast plate 20 is then positioned on the hole 19 for inserting the latch 12 so as to cover it partially, so that the opening 23 is substantially aligned with the

latch 12 in the first configuration.

[0021] In this manner, when the leaf 14 that supports the main body 13 abuts against the jamb 17, moving the latch 12 from the first configuration to the second configuration, the latch passes through the opening 23 of the contrast plate 20 and enters the compartment 22, engaging the retention element 18 formed by the flap 24 of the contrast plate 20.

[0022] In practice it has been found that the invention achieves the intended aim and objects, providing a lock that allows to provide the latch insertion hole during the installation of the lock easily and precisely without requiring adaptations of the contrast plate for covering the hole to ensure effective closure of the lock.

[0023] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; all the details may further be replaced with other technically equivalent elements.

[0024] In practice, the materials employed, so long as they are compatible with the specific use, as well as the contingent shapes and dimensions, may be any according to requirements and to the state of the art.

[0025] The disclosures in Italian Patent Application No. PD2008A000038 from which this application claims priority are incorporated herein by reference.

[0026] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A lock, particularly for sliding doors (11) and the like, which comprises a latch (12) supported so that it can slide and rotate by a main body (13) that is associated with a leaf (14) and accommodates means (15) for actuating said latch (12), which can be operated by the user to pass

- from a first configuration, in which said latch (12) is substantially retracted into said main body (13),
- to a second configuration, in which said latch (12) is extracted from said main body (13),
- and vice versa,

characterized in that said latch (12) comprises an element (16) for marking by striking a jamb (17) that supports an element (18) for retaining said latch (12), on said jamb (17) there being a hole (19) which has a substantially circular cross-section with its axis (A) aligned with said marking element (16) when said latch (12) is in said second configuration, a contrast

plate (20), which partially covers said hole (19) and is provided with said retention element (18), being associated with said jamb (17), said latch (12), in said second configuration, inserted in said hole (19), being engaged with said retention element (18) to prevent the spacing of said leaf (14) from said jamb (17). 5

2. The lock according to claim 1, **characterized in that** said latch (12) has a pointed nose (16a) that forms said marking element (16). 10
3. The lock according to one or more of the preceding claims, **characterized in that** it comprises a cup-shaped element (21), which is inserted in said hole (19) and forms an accommodation compartment (22) for said latch (12). 15
4. The lock according to one or more of the preceding claims, **characterized in that** said hole (19) is a cylindrical dead hole. 20
5. The lock according to one or more of the preceding claims, **characterized in that** said contrast plate (20) has an opening (23) for the insertion of said latch (12) in said hole (19), said retention element (18) being formed by a flap (24) of said contrast plate (20) that is perimetric with respect to said opening (23). 25

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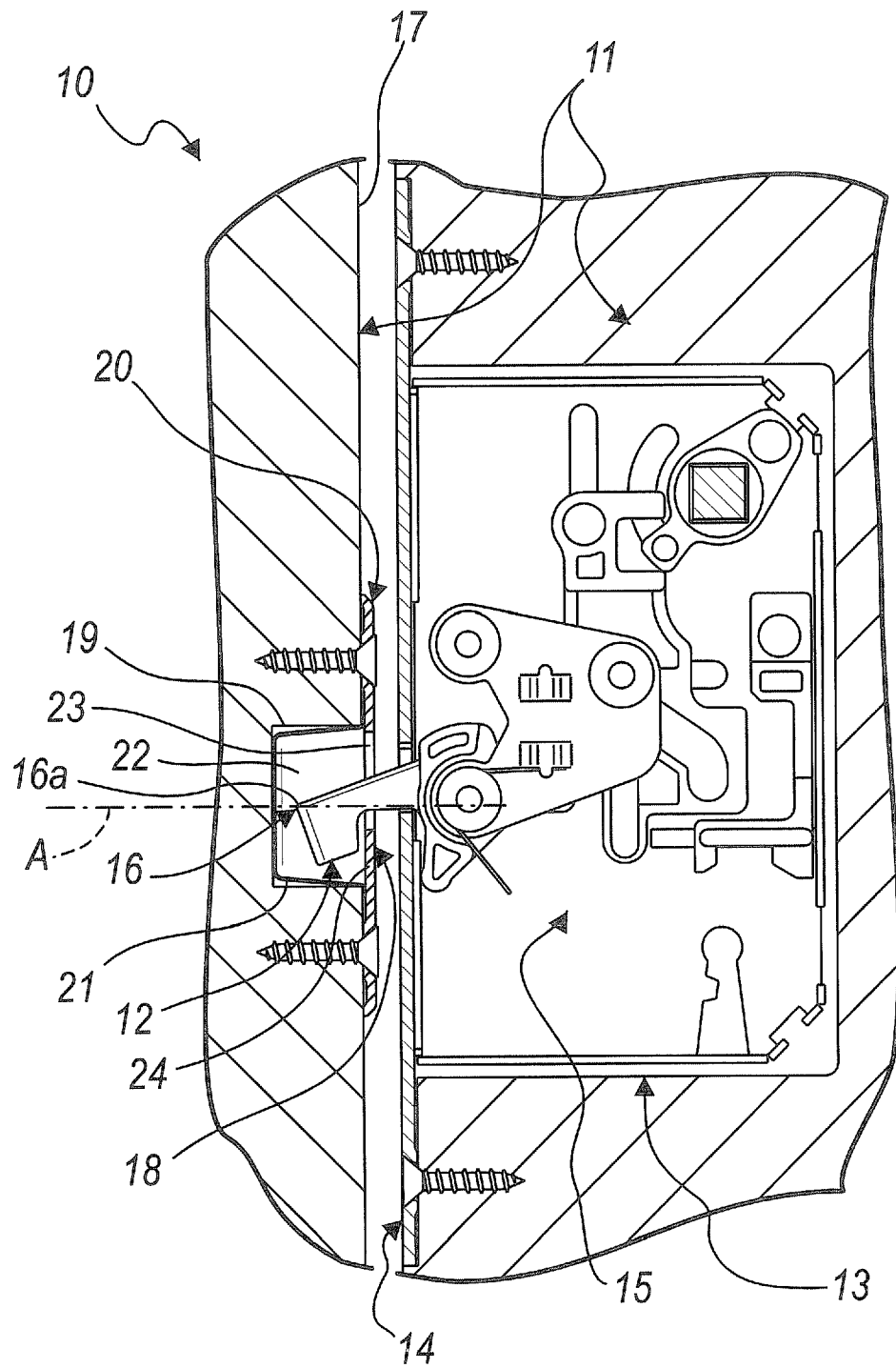


Fig. 1

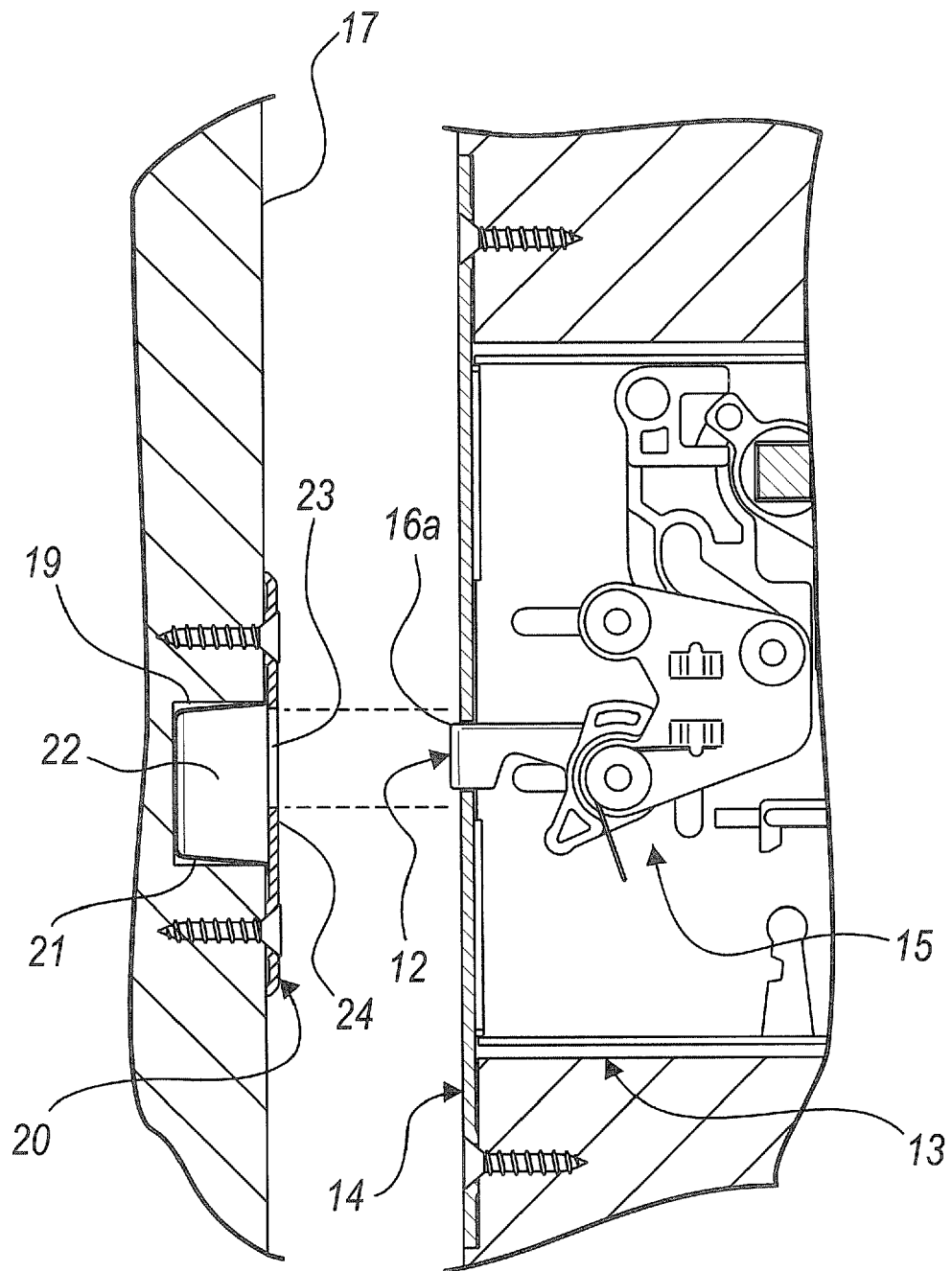


Fig. 2

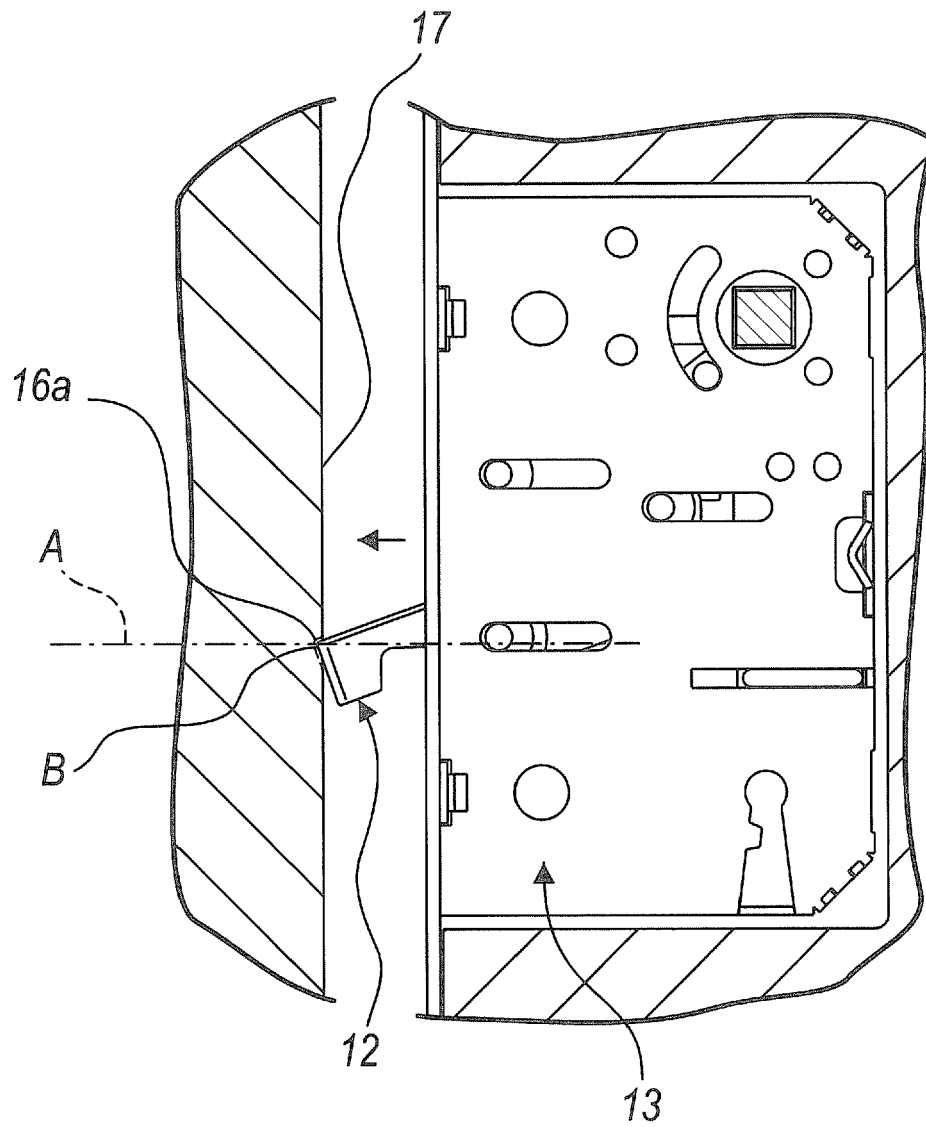


Fig. 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- IT PD20080038 A [0025]