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(71) Applicant: **Alban Giacomo S.p.A.**
36060 Romano d'Ezzelino (VI) (IT)

(72) Inventor: **Alban, Antonio Mario**
36061 Bassano Del Grappa VI (IT)

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

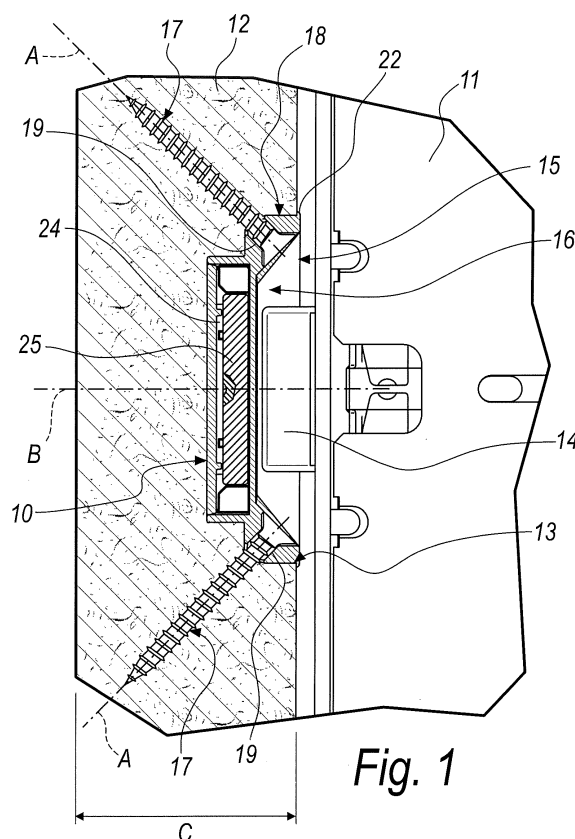
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(54) **Strike plate for spring-latch locks, particularly with a magnetic spring latch**

(57) A strike plate (10) for spring-latch locks (11), particularly with a magnetic spring latch, to be associated with a support (12) constituted by a frame of a door or window or by a leaf and provided with a spring-latch hole (13) in a position that corresponds to the spring latch (14) in order to receive it when the lock (11) closes, comprising - a body (15), which forms a receptacle (16) for the spring latch (14), to be positioned at the spring-latch hole (13), - means (17) for fixing the body (15) to the support (12), such as screws or the like.

The body (15) comprises at least one protrusion (18) for insertion in the spring-latch hole (13) which has engagement seats (19) for the fixing means (17), the engagement seats (19) being arranged inside the spring-latch hole (13) when the protrusion (18) is inserted therein.

The engagement seats (19) further define, for the fixing means (17), fixing directions (A) which are inclined with respect to the longitudinal axis (B) of the spring-latch hole (13) in the support (12).



Description

[0001] The present invention refers to a strike plate for spring-latch locks, particularly with a magnetic spring latch.

[0002] Known strike plates comprise a body that forms an accommodation seat for the spring latch, and an elongated fascia upon which are formed the seats for the screws for fixing the strike plate to a support, which is constituted by the frame or by a leaf of a door or window.

[0003] To receive the strike plate the support has to be worked to form the spring-latch hole and the seat for the fascia, so that the strike plate is flush with the surface of the support.

[0004] Such working is generally carried out with a cutter that carves the spring-latch hole, narrower and deeper than the space for the fascia, which is less deep but which extends further over the support.

[0005] The aim of the present invention is to devise a strike plate for spring latch locks, particularly with a magnetic spring latch, which requires working of the support that is simpler and smoother compared to the work currently required to install known spring latches.

[0006] Within this aim, an object of the invention is to provide a strike plate that can be installed in supports that are not particularly deep, such as the frames of glass doors or windows with thin mountings.

[0007] Another object of the invention is to devise a strike plate that makes it possible to conceal the screws or other means designed to fix it to the support.

[0008] A further object of the invention is to provide a strike plate that is structurally simple and easy to use, and which can be produced at low cost.

[0009] This aim, as well as these and other objects which will become better apparent hereinafter, are achieved by a strike plate for spring-latch locks, particularly with a magnetic spring latch, to be associated with a support constituted by a frame of a door or window or by a leaf and provided with a spring-latch hole in a position that corresponds to the spring latch in order to receive it when the lock closes, comprising

- a body, which forms a receptacle for the spring latch, to be positioned at said spring-latch hole,
- means for fixing said body to said support, such as screws or the like,

characterized in that said body comprises at least one protrusion for insertion in said spring-latch hole, provided with engagement seats for said fixing means, said engagement seats being arranged inside said spring-latch hole when said at least one protrusion is inserted therein, said engagement seats forming, for said fixing means, fixing directions that are inclined with respect to the longitudinal axis of said spring-latch hole in said support.

[0010] 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 strike plate according to the invention, illustrated, by way of non-limiting example, in the accompanying drawings, wherein:

Figure 1 is a transverse sectional view of a strike plate, according to the invention;

Figure 2 is a front elevation view of the strike plate, according to the invention, installed on a support;

Figure 3 is a sectional view, taken along the line III-III of Figure 2, of the strike plate, according to the invention, installed on a support;

Figure 4 is a transverse sectional view of the strike plate, according to the invention, in a particular installation configuration;

Figure 5 is a transverse sectional view of the strike plate, according to the invention, in a further embodiment.

[0011] It should be noted that everything that, in the course of the procedure of obtaining the patent, should be found to be prior art, is not intended to be claimed and is intended to be removed from the claims.

[0012] With reference to the figures, the reference numeral 10 generally designates a strike plate for spring-latch locks 11, particularly for a magnetic spring latch, to be associated with a support 12 constituted by a frame of a door or window or by a leaf and provided with a spring-latch hole 13 in a position that corresponds to a spring latch 14 in order to receive it when the lock 11 closes.

[0013] The strike plate 10 comprises

- a body 15, which forms a receptacle 16 for the spring latch 14, to be positioned at the spring-latch hole 13,
- means 17 for fixing the body 15 to the support 12, in particular screws or the like.

[0014] According to the invention, the strike plate 10 comprises at least one protrusion 18 for insertion in the spring-latch hole 13 which has engagement seats 19 for the fixing means 17, such seats being arranged inside the spring-latch hole 13 when the protrusion 18 is inserted therein.

[0015] In addition, the engagement seats 19 define, for the fixing means 17, fixing directions A in the support 12 which are inclined with respect to the longitudinal axis B of the spring-latch hole 13 in the support 12.

[0016] Advantageously, the body 15 is adapted to be accommodated substantially integrally in the spring-latch hole 13, protruding from it flush with the support 12.

[0017] The body 15 advisably comprises faceplates 20 for covering the engagement seats 19, during use the faceplates 20 concealing the fixing means 17 inserted in the engagement seats 19.

[0018] Advantageously, the body 15 is made of plastics, the faceplates 20 forming a single body with it and being hinged at the periphery of the engagement seats

19 so as to be capable of being closed upon them in order to conceal them.

[0019] With specific reference to Figure 4, the faceplates 20 are shown which are pulled back from the engagement seats 19, shown in solid lines, and pushed down on the engagement seats 19 to conceal the fixing means 17, shown in dotted lines.

[0020] The protrusion 18 is preferably structured like a recess and forms the receptacle 16 for the spring latch 14.

[0021] More precisely, the engagement seats 19 conveniently define the fixing directions A, which are inclined in a mutually diverging manner, in the support 12.

[0022] In this way the fixing means 17, specifically screws, sink obliquely into the support 12 with respect to the longitudinal axis B of the spring-latch hole 13, making it possible to use long screws, which therefore ensure the effective fixing of the strike plate 10 to the support, even if the depth C of the support 12 is reduced.

[0023] Moreover, the body 15 conveniently comprises two spacers 21a and 21b which laterally delimit the receptacle 16 so as to define it asymmetrically in the body 15.

[0024] The strike plate 10, installed on the support 12, has the spacers 21 a and 21b that abut against side walls 13a and 13b of the spring-latch hole 13, delimiting therein the receptacle 16 in an axially offset position, with respect to a longitudinal axis D of extension of the spring-latch hole 13.

[0025] In this way, when installing the strike plate 10 on the support 12, it is possible to modulate the position of the receptacle 16 of the spring latch 14, with respect to the thickness E of the support 12, according to two configurations that correspond to the alternative arrangements of the spacer 21a of greater thickness of the spacers 21a and 21b, towards a first side wall 13a of the side walls 13a and 13b of the spring-latch hole 13, or towards the second side wall 13b facing it.

[0026] In addition, the body 15 conveniently comprises a splinter protection edge 22 which in use is adapted to surmount, so as to conceal it, a lip 23 that forms the mouth of the spring-latch hole 13.

[0027] If the lock 11 is a magnetic spring latch, then the body 15 conveniently has a chamber 24 for accommodating a magnetic device 25 to return the spring latch 14.

[0028] With particular reference to Figure 5, in a further embodiment of the invention, a strike plate 100 to be associated with the support 12 constituted by a frame of a door or window or by a leaf, for example made of a metallic material such as aluminium or the like, and which has a spring-latch hole 13 in a position corresponding to the spring latch 14 in order to receive it upon closing the lock 11, has a particular characteristic in that its body 115 comprises a protrusion 118 for insertion in the spring-latch hole 13 which has engagement seats 119 for the fixing means 17, advisably achieved with grub screws 117.

[0029] The engagement seats 119 are arranged inside the spring-latch hole 13 when the protrusion 118 is inserted therein and, in addition, the engagement seats 119 define, for the fixing means 17, fixing directions A which are inclined with respect to the longitudinal axis B of the spring-latch hole 13 in the support 12.

[0030] The spring-latch hole 13 conveniently has tightening seats 120 that are adapted to be engaged by the grub screws 117 when they are tightened on the body 115 for locking it in the spring-latch hole 13.

[0031] In practice it has been found that the invention fully achieves the intended aim and objects, by devising a strike plate for spring-latch locks, particularly with a magnetic spring latch, which requires working of the support that is simpler compared to the working currently required to install known spring latches. Indeed, it does not require cutting of the seat for the fascia, since it has none, and thus it requires the execution only of the spring-latch hole.

[0032] Moreover, a strike plate, according to the invention, can be installed in supports that are not particularly deep, such as the frames of glass doors or windows with thin mountings, by having the screws inclined with respect to the longitudinal axis of the spring-latch hole, and which therefore sink obliquely into the depth of the support.

[0033] A strike plate, according to the invention, also makes it possible to conceal the screws, or other means adapted to its fixing to the support, by means of the faceplates.

[0034] What is described and illustrated with regard to the spring latch of a lock with mechanical or magnetic actuation is intended to be similarly understood for a lock-bolt.

[0035] The invention, thus conceived, is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims; in addition, all the details may be replaced by other technically equivalent elements.

[0036] In practice the materials employed, as well as the dimensions and the contingent shapes, may be any according to requirements and to the state of the art.

[0037] The disclosures in Italian Patent Application No. PD2009A000113 from which this application claims priority are incorporated herein by reference.

[0038] 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 strike plate (10, 100) for spring-latch locks (11), particularly with a magnetic spring latch, to be asso-

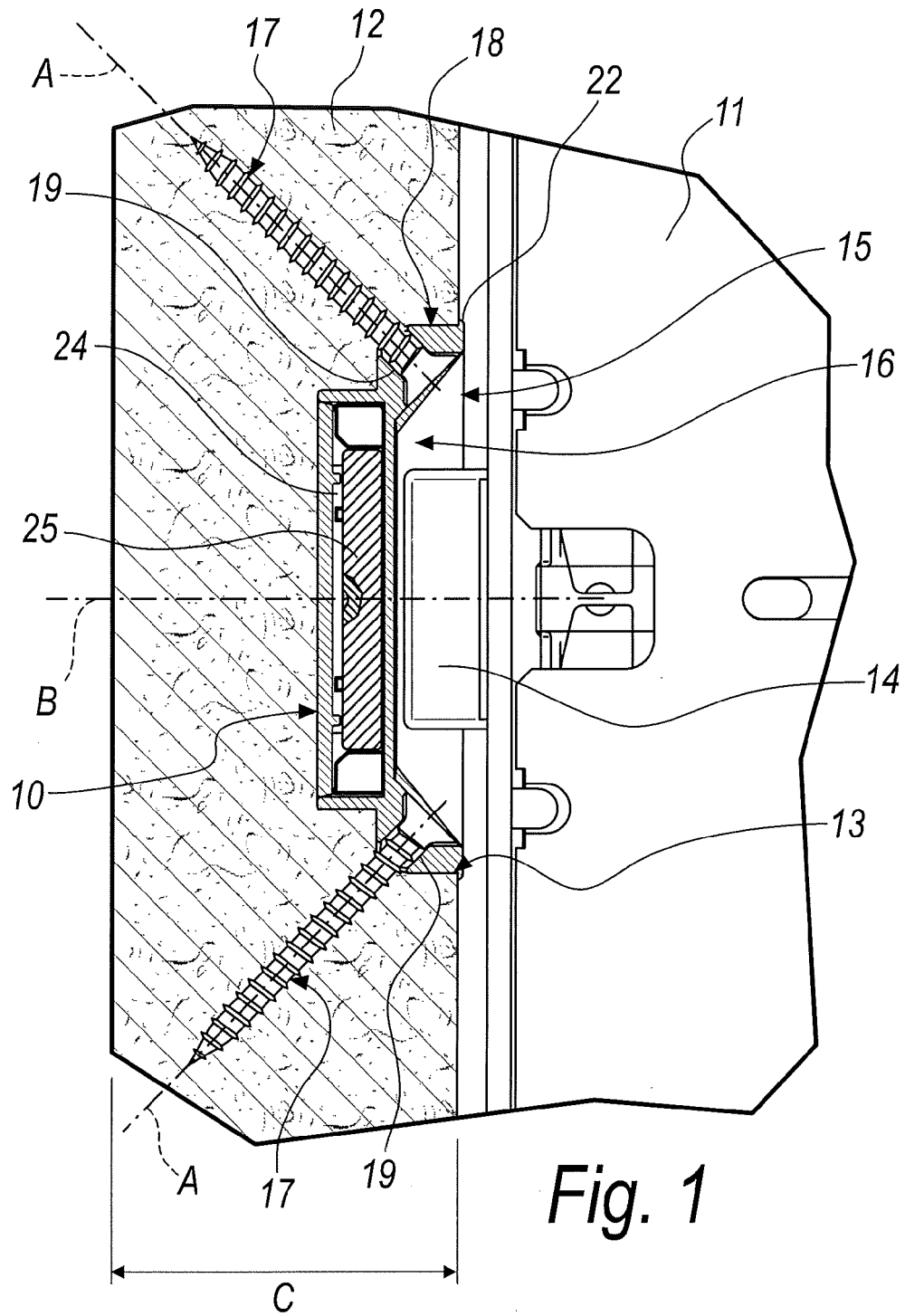
ciated with a support (12) constituted by a frame of a door or window or by a leaf and provided with a spring-latch hole (13) in a position that corresponds to the spring latch (14) in order to receive it when the lock (11) closes, comprising

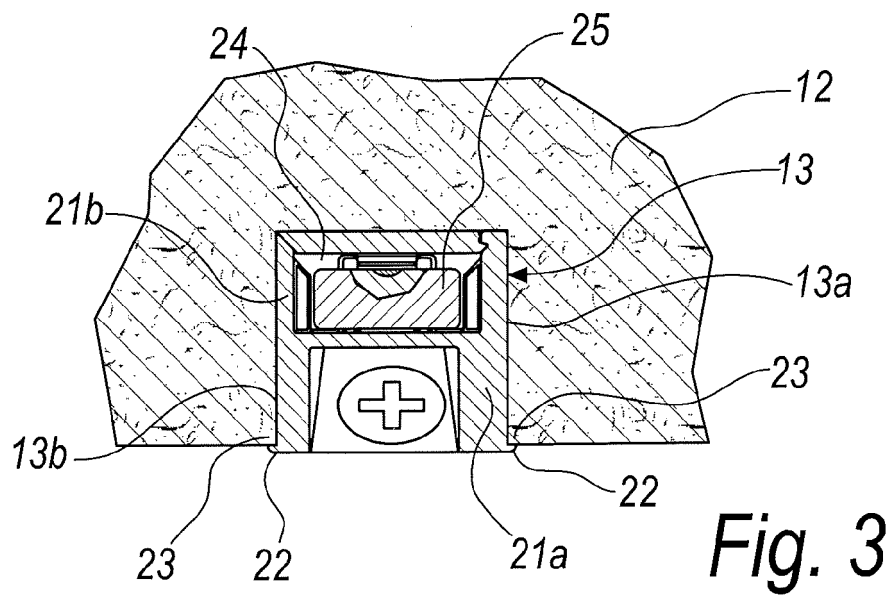
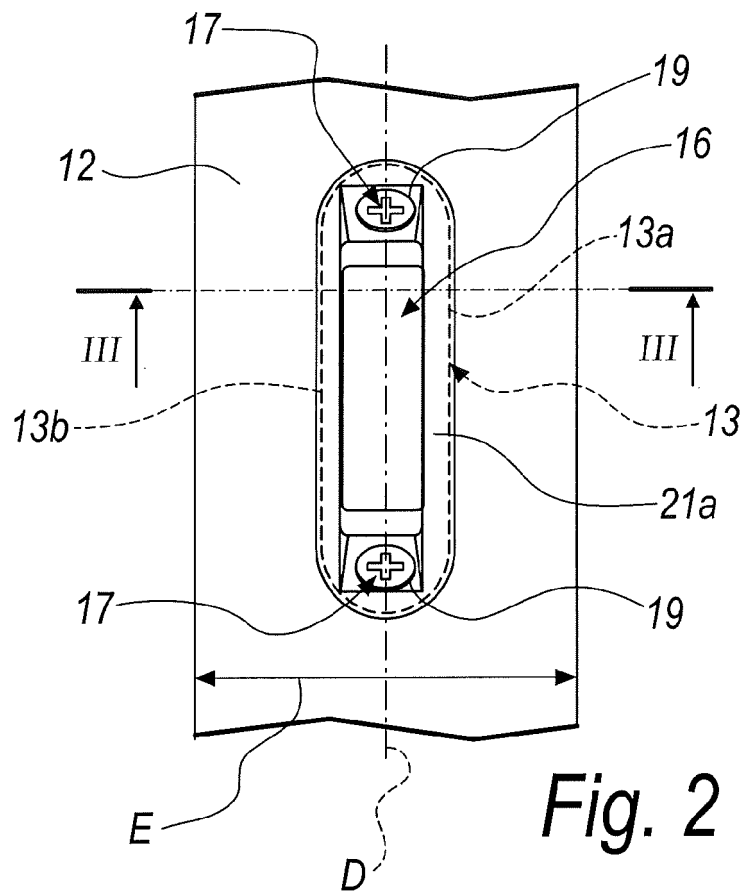
- a body (15, 115), which forms a receptacle (16) for the spring latch (14), to be positioned at said spring-latch hole (13),

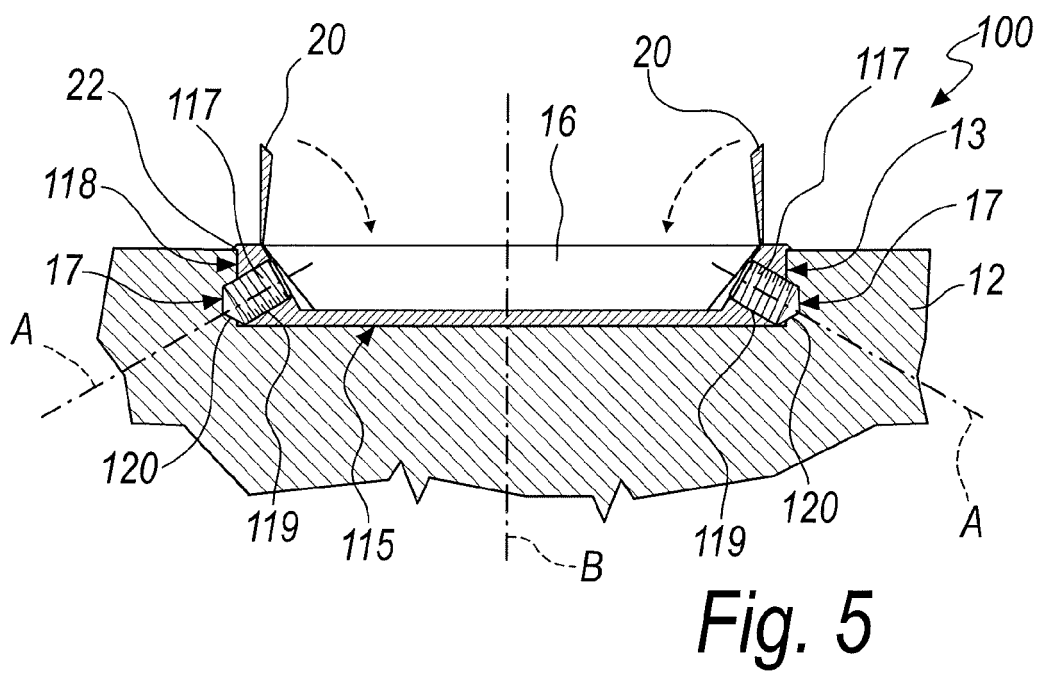
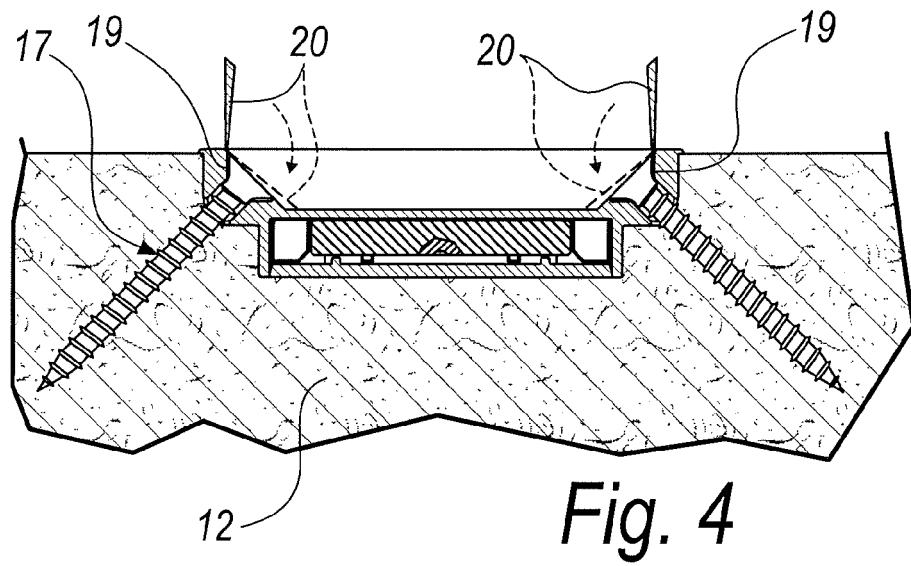
- means (17) for fixing said body (15, 115) to said support (12), such as screws or the like, **characterized in that** said body (15, 115) comprises at least one protrusion (18, 118) for insertion in said spring-latch hole (13), provided with engagement seats (19, 119) for said fixing means (17), said engagement seats (19, 119) being arranged inside said spring-latch hole (13) when said at least one protrusion (18, 118) is inserted therein, said engagement seats (19, 119) forming, for said fixing means (17), fixing directions (A) that are inclined with respect to the longitudinal axis (B) of said spring-latch hole (13) in said support (12).

2. The strike plate according to claim 1, **characterized in that** said body (15, 115) is adapted to be accommodated substantially fully in said spring-latch hole (13), protruding from it flush with said support (12).
3. The strike plate according to claim 1, **characterized in that** said body (15, 115) comprises faceplates (20) for covering said engagement seats (19, 119), during use said faceplates (20) concealing said fixing means (17) inserted in said engagement seats (19, 119).
4. The strike plate according to claim 1, **characterized in that** said protrusion (18, 118) is structured like a recess that forms said receptacle (16) for the spring latch (14).
5. The strike plate according to claim 1, **characterized in that** said engagement seats (19, 119) define said fixing directions (A), which are 8 inclined in a mutually diverging manner, in said support (12).
6. The strike plate according to claim 1, **characterized in that** said body (15, 115) comprises two spacers (21a, 21b), which delimit laterally said receptacle (16) so as to define it asymmetrically in said body (15), said strike plate (10, 100), installed on a support (12), having said spacers (21a, 21b) that abut against side walls (13a, 13b) of said spring-latch hole (13), delimiting therein said receptacle (16) in an axially offset position with respect to a longitudinal axis (D) of extension of said spring-latch hole (13).

7. The strike plate according to claim 1, **characterized in that** said body (15, 115) comprises a splinter protection edge (22) which in use is adapted to surmount, so as to conceal it, the lip (23) that forms the mouth of said spring-latch hole (13).









EUROPEAN SEARCH REPORT

Application Number
EP 10 16 0894

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Y	* column 1, lines 1-29 *	3,6,7	
	* column 2, line 45 - column 4, line 2; figures *		ADD. E05B9/08 E05B17/20
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Place of search Munich		Date of completion of the search 9 June 2010	Examiner Henkes, Roeland
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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