

The invention relates to a fitting for a door, window or the like, comprising, on the one hand, an espagnolette bolt or bolt lock provided with a casing in which is accommodated an operating mechanism allowing the actuation of at least one operating rod and, on the other hand, an electric locking device provided with driving means for driving the locking means moving perpendicularly to the operating rod or rods, this in accordance with the terms of the preamble of claim 1.

This invention will find its application, more particularly, in the field of the building ironmongery.

The espagnolette bolts or bolt locks for a door, window or the like are usually comprised of a casing integral with a face-plate and in which is accommodated an operating mechanism allowing the user to actuate one or several locking members.

These latter are generally comprised of one or two operating rods extending on both sides of the casing and sliding behind the face-plate of the espagnolette bolt or bolt lock. These rods are provided with one or a plurality of locking organs, for instance catches or rollers, coming out of said face-plate through openings machined in same, so as to co-operate with keepers integral with the sash-frame of the door, window or the like. Within the framework of bolt locks, these latter are provided with a key member allowing the immobilization in translation of the rod or rods or the annihilation of the action by the user onto an operating organ, such as a crutch-handle, knob or the like. In addition, the operating mechanism of these bolt locks also allows the actuation of another locking member and, viz., a half-turn bolt.

In some cases, it can prove particularly interesting to ensure the remote control of the locking of a leaf provided with such an espagnolette bolt or bolt lock.

For this purpose, espagnolette bolts or bolt locks have been designed provided with an electric locking device comprising driving means allowing the actuation, either direct or through a secondary connecting part, on one or several locking members. Thus, the driving means, comprised of either an electric motor or an electromag-

net, can control the movement of a half-turn bolt and/or of one or several rods.

These electric locking devices generally have relatively large sizes because of the driving means the power of which should be sufficient to cause the movement of the locking members. Therefore, the casing of the espagnolette bolt or bolt lock, containing said driving means, has larger sizes than a standard casing and requires a deeper and wider recess in the edge of the leaf to allow its fitting. Now, such a specific recess requires the use of a tooling different from the one usually implemented. It should also be noted that the leaf should have a sufficient thickness authorizing the recess.

Furthermore, within the framework of the bolt locks, driving means are known which act onto the locking system, for instance the key member, to immobilize the locking members. Such driving means require a smaller power to confer a translation or a rotation to a locking member when locking the leaf of a door, window or the like. This reduction in power of the driving means does however not allow to solve the aforementioned trouble. Irrespective of the size of an electric motor or an electromagnet, their insertion into the casing of a bolt lock indeed unavoidably gives rise to an increase of the size of this casing. This results into a wider and, in any case, deeper recess in the edge of the leaf.

In some cases, the electric locking device and, viz., the driving means are inserted onto the leaf and act onto the operating mechanism fitted into the edge of same. This solution only partly solves the problem, since it requires the machining of the inner face of said leaf.

Another disadvantage which generally has the association of an electric locking device with an espagnolette bolt or bolt lock resides in that a large number of parts of the operating mechanism of same compulsorily involve a particular configuration in order to authorize the integration of the driving means.

It is thus necessary to manage a heavier manufacturing and a larger stock in order to have available espagnolette bolts or bolt locks

some of which are provided with an electric locking device and other ones not.

From the previous EP-A-0 173 987 is also known an electrically operated auxiliary locking device associated with an espagnolette bolt or bolt lock.

As a matter of fact, this auxiliary locking device consists of an electromagnet provided with a locking stud capable of co-operating with an operating organ actuating one or the locking members of the espagnolette bolt or bolt lock. This operating organ can be a trestle acting onto a tilting bolt integrated into the front edge of the door or window.

This auxiliary locking device can however also be associated with the main casing containing the operating mechanism of said espagnolette bolt or bolt lock.

However, in order to allow this electromagnet to ensure the function which it has been assigned, it should necessarily be firmly secured either to the main casing of the espagnolette bolt or bolt lock or onto one of the casings containing a locking member. As a consequence, the association of such an auxiliary locking device requires a specific arrangement of the espagnolette bolt or bolt lock. This latter thus departs from the standard characteristics and imposes an additional manufacturing and storage management.

Furthermore, because of its arrangement perpendicular to the operating rods, the electromagnet necessitates a recess of increased depth in the front edge of the leaf receiving the espagnolette bolt or bolt lock. Now, this invention precisely intends to limit the size of this recess.

Moreover, the direct and sole action of the locking stud onto any operating organ whatsoever has some disadvantages. Viz., the actions of a swindler onto this operating organ are fully repercutated onto said locking stud the strength of which is relatively limited. However, in the event the whole withstands these actuations, it is likely that the locking stud has suffered such a distortion that the electromagnet is out of service. Now, in these circumstances, the user is given no solution to unlock the door or window again.

The object of this invention is to cope with all the above-mentioned trouble.

The invention as characterized in the claims solves the problem residing in creating a fitting for a door, window or the like comprising, on the one hand, an espagnolette bolt or a bolt lock provided with a casing integral with a face-plate and in which is accommodated an operating mechanism allowing the actuation of at least one actuating rod and, on the other hand, an electrical locking device having, on the one hand, the form of a unit separated from the espagnolette bolt or bolt lock and installed either at any place located in the longitudinal extension and on both sides of the casing or in the immediate extension of same, joined to one end of this latter and, on the other hand, having locking means subject to driving means and electric control organs and co-operating with the operating mechanism and/or the operating rod, said locking means being comprised of a slide moving perpendicularly to the longitudinal axis of the operating rod and having a front end co-operating, in locking position, with said operating mechanism and/or the operating rod, said driving means being dissociated from said locking means and acting according to an axis perpendicular to the movement of said slide.

The advantages achieved thanks to this invention mainly reside in that the location of the electric locking device with respect to the casing of the espagnolette bolt or bolt lock allows to avoid a deeper and wider recess in the stile of the leaf. Only an additional longitudinal recess is necessary, which allows the use of a standard tooling. It should be noted that this additional recess can be made either in the immediate extension of the one provided for the casing of the espagnolette bolt or bolt lock or at any place on the edge of the leaf.

Another advantage achieved thanks to this invention resides in that the association of the electric locking device with an espagnolette bolt or bolt lock no longer gives rise to modifications of the components of the operating mechanism and hardly no modifications of the casing containing same. Therefore, it is advantageous to be

able to adapt the electric locking device to any espagnolette bolt or bolt lock already installed, having only very few modifications to carry out, excepted the longitudinal enlargement of the recess. The invention is explained more in detail hereinafter with reference to drawings showing only one embodiment.

- Figure 1 shows a schematical partial elevation view of a fitting according to the invention, comprising an espagnolette bolt or bolt lock and an electric locking device (the covers of the casings of said electric locking device and of the espagnolette bolt or bolt lock having been removed),
- Figure 2 shows a plan view of the casing of the electric locking device,
- Figure 3 shows an elevation view of the locking means of the electric locking device according to a second embodiment,
- Figure 4 shows an elevation view of the locking means of the electric locking device according to a third embodiment,
- Figure 5 shows an elevation view of the guiding member inserted onto one end of the casing of the espagnolette bolt or bolt lock,
- Figure 6 shows a plan view of the guiding member shown in Figure 5.

Reference is made more particularly to Figures 1 and 2.

The fitting 1 for a door, window or the like according to the invention comprises an espagnolette bolt or bolt lock 81, essentially comprised of a casing 2 inserted onto the inner face of a face-plate 82 (not shown) and intended for being fitted into the edge of a leaf.

The casing 2 serves as an accommodation for an operating mechanism 3 the function of which is to transmit the action by a user onto any operating organ whatsoever, for instance, a crutch-handle or a key member, to one or several locking members.

Thus, this operating mechanism 3 allows the actuation of at least one operating rod 83 extending on both sides of the casing 2. This operating rod 83 generally bears a plurality of locking organs, such as rollers, catches or the like which are capable of co-operating with keepers arranged on the sash-frame.

Within the framework of a bolt lock, the operating mechanism 3 furthermore allows the actuation of another locking member and, viz., of a half-turn bolt 4.

When an espagnolette bolt or a bolt lock is provided with two operating rods extending on both sides of the casing 2, they are moved by the action onto the operating mechanism 3, either in opposite directions with respect to each other or into an identical direction. In this latter case, said operating rods are generally connected by means of a trestle 5 or the like accommodated inside the casing 2 and onto which acts the operating mechanism 3.

According to the invention, the fitting 1 comprises a remote-controlled electric locking device 6 the function of which is to immobilize, in locked position and upon closing the leaf of the door, window or the like, a movable organ of the operating mechanism 3 and/or the operating rod or rods 83 of the espagnolette bolt or bolt lock 81.

This electric locking device 6 is advantageously located in the longitudinal extension of the casing 2 and is in the form of a separate unit comprised of a second casing 7.

This latter contains, more particularly, electric control organs 8 actuating driving means 9 ensuring the driving of the locking means 10.

Thus, said casing 7 is comprised of an enantiomorphous cover 11 and a bottom 12 comprising a series of recesses in which the aforementioned members are accommodated. It is important to note that the thickness 7A as well as the width 7B of this casing 7 do not exceed the corresponding sizes of the casing 2 of the espagnolette bolt or bolt lock. This allows the use of an identical tooling when making the recess in the edge of the leaf.

Furthermore, according to the invention, this electric locking device 6 may be fitted into the edge of a leaf, either in the immediate extension and joined to the casing 2 or at any place located on either side of this latter.

In the first case, the cover 11 and the bottom 12 of the casing 7 have, as shown in Figure 1, a particular morphology at the level of

their part bearing the reference numeral 13 and co-operating with the casing 2, the object of this feature being to ensure their adaptation to one end 2A of this latter.

More exactly, said casing 2 is, at its one end 2A located on the longitudinal axis of the operating rod or rods, without the wall forming the edge and connecting the front and rear cover plates of this casing 2. Thus, the part 13 of the cover 11 and the bottom 12 of the casing 7 is comprised of may be partially inserted, for instance, into the upper edge 14 of the casing 2, as shown in Figure 1 and act as distance piece intercalated between the cover walls of this latter. This part 13 of the cover 11 and the bottom 12 is furthermore provided with openings 15 matching openings machined in said cover plates. These openings 15 serve as a passageway for securing organs, such as screws, rivets or the like, for making the electric locking device 6 integral with the casing 2 of the espagnolette bolt or bolt lock.

The enantiomorphous character of the cover 11 and the bottom 12 allows to ensure the reversibility of the electric locking device 6. This both for a right-left-hand use on the leaf, but also with respect to a median plane transversal to the casing 2 of the espagnolette bolt or bolt lock 81.

As far as the electric control organs 8 allowing the actuation of the driving means 9 are concerned, these are comprised of a control relay system 16 arranged in a recess 17 located in the upper part 17A of the casing 7. These electric operating organs 8 also comprise a connecting member 18 allowing the connection to an external power supply unit connected, for instance, to a control unit.

It should be noted that, in order to have access to this connecting member 18, the bottom 12 and/or the cover 11 comprise an opening allowing the insertion of a connecting plug.

The electric control organs 8 act onto the operation of the driving means 9 and, more particularly, of an electric motor driving the locking means 10.

It can however be considered to substitute an electromagnet for such an electric motor to drive the locking means 10. The modifica-

tions which it would be convenient to carry out, in these circumstances, on the casing 7 and generally on the aggregate components of the electric locking device 6 are within reach of the Professional considered. It is therefore obvious that one can proceed to
5 such a substitution without thereby departing from the framework and the spirit of this invention.

The locking means 10, actuated by the electric motor 9, are substantially comprised of a slide 19 moving within the casing 7, perpendicularly to the longitudinal axis of the operating rods. Thus,
10 the front end 20 of this slide 19 is capable of co-operating, in locking position, with either one of these operating rods 83 or with a connecting member 21 connected to the operating mechanism 3. According to another mode of operation, this front end 20 of the slide 19 can immobilize either an operating rod 83 or a connecting
15 member 21 and simultaneously co-operate with the face-plate 82 of the espagnolette bolt or bolt lock. In these circumstances, said face-plate 82 acts as a keeper and comprises, for this purpose, an opening or a slot into which partially engage the locking means 10. As far as the connecting member 21 is concerned, this has necessarily a movement according to a direction substantially parallel to
20 said operating rods 83, under the action of the operating mechanism 3.

Figure 1 shows a fitting the electric locking device 6, and, viz., the slide 19, of which co-operates with such a connecting member
25 21. In this particular case, this latter is connected to the trestle 5 conferring to both operating rods, extending on both sides of the casing 2, an identical movement. However, in other cases, this connecting member 21 can be connected to any part whatsoever of the operating mechanism 3 the movement of which occurs
30 according to the aforementioned conditions.

Thus, according to the above-described configuration, the locking of the leaf of a door, window or the like is achieved by moving the slide 19 towards the face-plate 82, so that its front end 20 be positioned above the upper edge 22 of the connecting member 21, immobilizing same in its locked position. By contrast, the backward
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movement of the slide 19 releases the operating mechanism 3 ensuring a movement parallel to the operating rods of said connecting member 21.

The guiding of the slide 19 is ensured by a set of journals 23, 24, 25 arranged in the bottom 12 and in the cover 11 of the casing 7. It can however turn out that the stress exerted by a swindler or an uncautious user onto an operating organ of the fitting causes the slide 19 to bend under the action of the pressure exerted by the connecting member 21. In order to cope with this disadvantage, said slide 19 is provided, at its front end 20, with a guide block 26 the upper edge 27 of which co-operates with a journal 28 arranged in the bottom 12 and the cover 11, parallel to the movement of the slide 19. In locking position, this guide block 26 is located in the extension of the connecting member 21.

According to another embodiment, as shown in Figure 4, this guide block 26 has the form of an independent member 70 inserted onto the upper end 71 of a vertical leg 72 integral with the front end 20 of the slide 19. For this purpose, in the upper edge 73 of this vertical leg 72 is made a cutting up the side edges of which are capable of engaging into grooves 74 machined on both sides of the guide block 26. Thus, like before, this latter is capable of being located, in locked position, above the connecting member 21 or even of acting onto an operating rod. This guide block 26 or, more particularly, the member 70 also co-operates, at the level of its upper edge 75, with the journal 28 arranged in the bottom 12 and the cover 11 and this irrespective of the position of the slide 19.

Within the framework of a direct co-operation between the locking means 10 and an operating rod of the espagnolette bolt or bolt lock, said operating rod 83 is provided with a slot which is located, in locked position, in front of the slide 19. In this configuration, the front edge 20 of this latter, with or without a guide block 26, engages into this slot made in the operating rod, in order to immobilize same.

Furthermore, the guide block 26, whether defined or not by a dissociable member 70, can advantageously form a locking bolt which is

capable of penetrating, in locked position, into the keeper formed by the opening in the face-plate 82. This arrangement confers a perfect reliability to the electric locking device 6, since a forced action onto the operating mechanism 3 allows in no case the
5 deterioration of same.

It should also be noticed that the guide block 26, in the form of the member 70, can be designed out of a stronger material than that of the slide 19. This results into a reduction of the manufacturing cost for same and a longer life of the electric locking device 6.
10 The front end 20 of the slide 19 or the front face 76 of the guide block 26 (irrespective of its embodiment) are preferably slightly chamfered on their periphery or have a slanted cutting up at the level of the inner part facilitating their engagement either into a slot machined in the operating rod 83 and/or into the face-plate 82
15 or above the upper edge 22 of the connecting member 21.

The electric motor 9, allowing to drive the slide 19, is inserted into a recess 29 made in the cover 11 and the bottom 12 of the casing 7. More particularly, this recess 29 ensures the locking in rotation of the electric motor 9. For this purpose, it has a substantially cylindrical shape and comprises, on its inner wall and at
20 its one end, an inner rim co-operating with a peripheral groove made in the wall of the electric motor 9. At the mounting, it is important that the engagement of this inner rim into the above-mentioned peripheral groove occurs with some resistance. Obviously,
25 other means for locking the electric motor 9 in rotation can be considered.

The recess 29 also allows to position this latter with respect to the slide 19. Thus, according to the invention, said recess 29 is so arranged that the drive shaft 30 of the electric motor 9 be perpendicular to the movement of the slide 19 and capable of co-
30 operating with same through adequate driving means 31.

According to a first embodiment, the driving means 31 are comprised of a toothed gear 32 mounted onto the end of the drive shaft 30 and co-operating with a rack 33 machined in the slot 34 made in the
35 slide 19.

Therefore, the driving of the electric motor 9 causes the toothed gear 32 to rotate and the slide 19 to translate inside the casing 7. The slide 19 preferably comprises means 36, 37 for controlling the stoppage of the running of the electric motor 9. Thus, these
5 stop control means 36, 37 are comprised of wings 38, 39 respectively extending on both sides of the slide 19. These wings 38, 39 form operating fingers respectively actuating a locking stop switch 40 and an opening stop switch 41. The designation of these switches 40, 41 is chosen by analogy with their function. Thus, the locking
10 stop switch 40 causes the electric motor 9 to stop when the slide 19 is in foremost locking position. By contrast, the opening stop switch 41 controls the stoppage of the running of the electric motor 9 when said slide 19 is in retracted position, having released the operating mechanism 3 and, more particularly, the connecting
15 member 21 or the operating rod.

One 39 of the wings 38, 39 extending on both sides of the slide 19 advantageously also serves as a manual operating organ for this latter. As a matter of fact, it appears to be absolutely necessary, for safety reasons, to be able to control the unlocking of the operating rods of the espagnolette bolt or bolt lock when the electric
20 locking device 6 is out of service or when the control is inaccessible.

For this purpose, the bottom 12 and/or the cover 11 is provided with a slot 42 arranged in front of the wing 39, in order to ensure
25 the accessibility to same and to control the forward movement and generally the rearward movement of the slide 19.

This slot 42 has advantageously a semi-circular shape facilitating the transmission to the slide 19 of the action external to the casing 7.

30 The machining of the rack 33 of the slide 19 can prove to be an operation particular delicate to be carried out. In order to cope with this disadvantage, the driving means 31 can be formed, according to a second embodiment, by an eccentric integral with a disc rotatingly driven by the drive shaft 30 of the electric motor 9.

35 In these circumstances, the slide 19 comprises, as shown in Figure

3, on the one hand, a groove 43 in which is accommodated and moves the above-mentioned disc. On the other hand, the slide 19 is provided with a cut 44 machined in its one side edge 45 and extending transversally to its longitudinal axis. Therefore, during the running of the electric motor 9, the eccenter revolves inside the cut 44 while causing the slide 19 to move rearwards or forwards.

This driving of the slide 19 through an eccenter can however have a disadvantage, viz. within the framework of a manual unlocking control. As a matter of fact, such a manual unlocking control, achieved by acting onto the wing 39, can prove practically impossible when the eccenter is located substantially on the longitudinal axis of the slide 19, thus in alignment with the drive shaft 30 of the electric motor 9 and in the extension of the force applied onto said wing 39.

In order to cope with the above-mentioned disadvantage, the driving means 31 are comprised, according to a third embodiment shown in Figure 4, on the one hand, of a disc 50 integral with the drive shaft 30 and bearing an eccenter 51. This latter is engaged into a cut 52 machined in the slide 19 and having a morphology identical to the above-described cut 44. On the other hand, these driving means 31 comprise a manual control push-button 46 comprised of a wing 47 extending parallelly to and above the slide 19 and an operating lever 48 integral with one longitudinal edge 77 of said wing 47 and continuing under the slide 19.

More particularly, the wing 47 of this control push-button 46 is provided with a rack 49 engaging with a toothed crown 78 topping the disc 50. Furthermore, the operating lever 48 is inserted into a recess 79 provided for in the side edge 80 of the slide 19 and is in the same plane, perpendicular to the casing 7, as the wing 39 forming the stop control means 37. This arrangement ensures the accessibility to said operating lever 48 through the slot 42.

For the good working of the driving means 31, according to this third embodiment, it is important to ensure there is some backlash between either the eccenter 51 and the cut 52 or the operating lever 48 and the recess 79.

The advantage of such manual control push-button 46 resides in that it is possible to transmit a tangential force onto the toothed crown 78 and this irrespective of the position of the eccentric 51 in the cut 52 with respect to the longitudinal axis of the slide 19.

In Figures 5 and 6 is shown a guiding member 54 inserted onto the end 2A of the casing 2 of the espagnolette bolt or bolt lock at which is located the electric locking device 6. More particularly, this guiding member 54 allows to ensure the functions which the edge of the casing which is inexistent in the framework of the espagnolette bolt or bolt lock shown in Figure 1 usually serves for. Thus, this guiding member 54 allows to ensure the holding and guiding of the operating rod 83 and, in addition, the connection between the casing 2 and the face-plate 82. It advantageously also allows the guiding of the connecting member 21 during its movements parallel to the longitudinal axis of the operating rod or rods.

According to a preferred embodiment, this guiding member 54 is comprised of a parallelepiped-shaped body 55 of a width 56 substantially equal to the distance kept by the front and rear cover plates forming the casing 2. This body 55 is provided, on its side faces 57, with a tongue 58 co-operating with an opening provided for in said cover plates in order to ensure, upon assembling of same, the connection between the guiding member 54 and the casing 2.

In addition, two side plates 59, located on these same side faces 57 of the body 55, are projecting with respect to the front face 60 of this latter. Between these two side plates 59 are led to simultaneously move an operating rod 83 and the connecting member 21.

This front face 60 of the body 55 has also a central emboss 61 engaging into the slots respectively machined in said connecting member 21 and in the operating rod 83. A stud 62 arranged on this central emboss 61 allows to position the casing 2 of the espagnolette bolt or bolt lock on the face-plate 82. In addition, a tapped hole 63, arranged under the central emboss 61, allows the engagement of a screw ensuring their connection.

It is obvious that such a guiding member 54 is useful only within the framework of a fitting the electric locking device 6 of which is joined to the casing 2 of the espagnolette bolt or bolt lock and/or the locking means 10 of which co-operate with a connecting member 21 and not with an operating rod.

The advantages achieved thanks to this fitting according to the invention reside in that the recess it is necessary to make in the stile of a leaf to fit in the casing of the espagnolette bolt or bolt lock and the electric locking device has sizes, viz., in depth and in width, of the standard type and usually applying within the framework of the classical espagnolette bolts or bolt locks. Furthermore, the components of these latter and, in particular, their operating mechanism and their casing, are, excepted small details, not different from those involved in the fitting of this invention.



C L A I M S

1. Fitting for a door, window or the like, comprising:

• an espagnolette bolt or a bolt lock (81) provided with a casing (2) integral with a face-plate (82) and in which is accommodated an operating mechanism (3) allowing the actuation of at least one actuating rod (83) and

• an electrical locking device (6) having, on the one hand, the form of a unit separated from the espagnolette bolt or bolt lock and installed either at any place located in the longitudinal extension and on both sides of the casing (2) or in the immediate extension of same, joined to one end (2A) of this latter and, on the other hand, having locking means (10) subject to driving means (9) and electric control organs (8) and co-operating with the operating mechanism (3) and/or the operating rod (83),

characterized in that said locking means (10) are comprised of a slide (19) moving perpendicularly to the longitudinal axis of the operating rod (83) and having a front end (20) co-operating, in locking position, with said operating mechanism (3) and/or the operating rod (83), the driving means (9) being dissociated from the locking means (10, 19) and acting according to an axis perpendicular to the movement of the slide (19).

2. Fitting according to claim 1, characterized in that said operating mechanism (3) comprises a connecting member (21) actuated by said operating mechanism (3) and moving in a direction parallel to the longitudinal axis of the rod (83), said front end (20) co-operating, in locking position, either with the operating rod (83) or with the connecting member (21) or simultaneously with the operating rod (83) or the connecting member (21) and with the face-plate (82) of the espagnolette bolt or bolt lock (81).

3. Fitting according to claim 1, characterized in that the driving means (9) are provided perpendicularly to the movement of said slide (19) and acting onto same through driving means (31).

4. Fitting according to claim 1, characterized in that the electric locking device (6) is comprised of a casing (7) formed of an enantiomorphous cover (11) and a bottom (12) and serving as a recess



for the electric control organs (8) and the locking means (10), in which bottom and/or cover is provided a slot (42), provided for at the level of said slide (19), ensuring the accessibility to this latter and, as a consequence, its manual control.

5 5. Fitting according to claim 4, characterized in that the cover (11) and the bottom (12) of the casing (7) have a part (13) inserted into one end (2A) of the casing (2), so as to form a distance piece between the cover plates forming this latter, this part (13) of the cover (11) and the bottom (12) being provided with openings
10 (15) corresponding to openings machined in said cover plates, these openings (15) serving as a passageway for securing organs, such as screws, rivets or the like, in order to make the electric locking device (6) integral with the casing (2).

6. Fitting according to claim 2, characterized in that the slide is
15 provided, at its front end (20) with a guide bloc (26) located, in locking position, either in the extension of the connecting member (21) or in a slot provided for in an operating rod (83) or even in an opening machined in the faceplate (82) of the espagnolette bolt or bolt lock (81), this guide block co-operating, at the level of
20 its upper edge (27; 75) with a journal (28) arranged in the bottom (12) and the cover (11) of the casing (7), parallel to the movement of the slide (19) and inserted into the upper end (71) of a vertical leg (72) integral with the front end (20) of said slide (19).

7. Fitting according to claim 4, characterized in that the slide
25 (19) comprises means (36, 37) for controlling the stoppage of the running of the electric motor (9) comprised of two wings (38; 39; 48) respectively extending on both sides of said slide (19) and forming operating fingers co-operating with a locking stop switch (40) and an opening stop switch (41), one (39) of these wings being
30 able to serve, in addition, as a manual operating organ for the slide (19), a slot (42) provided for in the bottom (12) and/or in the cover (11) of the casing (7) in front of the wing (39, 40) ensuring the accessibility to same.

8. Fitting according to claims 3 and 4, characterized in that the
35 driving means (9) are formed of an electric motor inserted into a



recess (29) provided for in the bottom (12) and the cover (11) of the casing (7) and ensuring the positioning and the locking in rotation of said electric motor, same being provided with a drive shaft (30) arranged perpendicularly to the movement of the slide
5 (19) and co-operating with this latter through driving means (31) which are comprised of a toothed gear (9) and co-operating with a rack (33) machined in a slot (34) provided for in the slide (19).

9. Fitting according to claim 8, characterized in that the driving means (31) are formed of a disc driven in rotation by the drive
10 shaft (30) and accomodated in a recess (43) machined in the slide (19), this disc bearing an eccenter engaged into a cut (44) made in one side edge (45) of said slide (19) and extending transversally to the longitudinal axis of same.

10. Fitting according to claim 8, characterized in that the driving
15 means (31) are comprised, on the one hand, of a dis (50) integral with the drive shaft (30) and bearing an eccenter (51) engaged into a cut (52) machined in the slide (19) and, on the other hand, a manual control push-button (46) comprised of a wing (47) extending parallelly to and above the slide (19) and an operating lever (48)
20 integral with one longitudinal edge (77) of said wing (47) and continuing under the slide (19), this wing (47) being provided with a rack (49) engaging with a toothed crown (78) topping the disc (50) and the operating lever (48) being inserted into a recess (79) provided for in the side edge (80) of the slide (19) and being in the
25 same plane as the wing (39) forming the stop controlling means (37).

11. Fitting according to claims 1 and 2, characterized in that it comprises a guiding member (54) inserted onto the end (2A) of the casing (2) at which is located the electric locking device (6) and
30 ensuring, on the one hand, the holding and guiding of the operating rod (83) and of the connecting member (21) and, on the other hand, the connection between the casing (2) and the face-plate (82), this guiding member (54) being comprised of a body (55) comprising, on its side faces (57), on the one hand, a tongue (58) co-operating
35 with an opening provided for in each one of the cover plates form-



ing the casing (2) and, on the other hand, a side plate (59) being projecting with respect to the front face (60) of the body (55), between said side plates (59) sliding an operating rod (83) and a connecting member (21), said body (55) being in addition provided, 5 on its front face (60), with a central emboss (61) bearing a stud (62) and under which is provided for a tapped hole (63) serving for the engagement of a screw ensuring the connection of the casing (2) and the face-plate (82).