

The invention relates to a fitting for door, window or the like, comprising at least an espagnolette or espagnolette-lock provided with several vertically moving locking members co-operating with keepers arranged on the sash-frame of the door, window or the like, these locking members being integral with either an actuating rod or two actuating rods moving in opposite direction, sliding behind a head plate.

It is known to use such fittings for the locking of a door, window or the like. These fittings are generally housed, by fitting into a recess in the thickness and on the edge of the leaf or the sash-frame of the door or window. Hence, it is necessary to previously machine same so as to provide housings capable of receiving either the keepers or the espagnolette or espagnolette-lock, the rod or rods and the head plate. These machinings, on the one hand, mean a loss of time and, on the other hand, increase the cost of the door or window. It therefore proves to be judicious to cope with these troubles.

Furthermore, from the document FR-A-2 216 830 is known a lock device for a door provided with an espagnolette-lock allowing to simultaneously actuate various bolts by means of actuating rods. All these bolts and transmission gear, i.e. the actuating rods and the espagnolette-lock, are lodged in a single casing fixed by application against the leaf of the door. Similarly, the keepers, co-operating with the various bolts arranged on the leaf, are lodged in a single casing applied against the inner face of the sash-frame of the door. These casings are comprised of two nestable profiles, with a "U"-shaped cross-section, one of which forms the cover of the other one.

Said lock device has a number of disadvantages. Viz., the forming of the casings by "U"-shaped profiles makes necessary the fixing of this lock device by application against the inner face of the leaf or the sash-frame. This arrangement is necessarily prejudicial to the aesthetics of the door or window.

Furthermore, the mounting of a casing can be carried out only in two steps. It is necessary to first fix the "U"-shaped profile in which are housed the bolts and the transmission gear or the keepers and, afterwards, to apply the "U"-shaped profile forming the cover. For this purpose, the casings necessarily comprise means to assem-

ble both nestable "U"-shaped profiles. These assembling means are comprised of screws passing through openings provided in the profile forming the cover and co-operating with holes, having or not a thread, provided in the other profile. This mounting is therefore
 5 not among the quickest ones.

Another disadvantage of this lock device resides in that both "U"-shaped profiles, forming a casing, should both have openings for the passing-through of the various bolts and this irrespective of whether the casing forming the keepers or the casing containing the
 10 bolts and the transmission gear is concerned. This results into a considerable increasing of the machining time to construct the casing formed by both assembled "U"-shaped profiles.

It is also to be observed that this lock device can, in no case, apply to espagnolettes or espagnolettes-locks provided with vertically moving locking members. It is indeed necessary to be able to
 15 retract these locking members to inside the "U"-shaped profile to nest the "U"-shaped profile forming the cover. Similarly, the openings in the casing forming the keepers are incapable of receiving vertically moving locking members, such as rollers or the like.

The object of this invention is to cope with these troubles. The invention, as defined in the claims, allows to reach this scope by providing a fitting for a door, window or the like, comprising at least an espagnolette or espagnolette-lock provided with several vertically moving locking members co-operating with keepers ar-
 20 ranged on the sash-frame of the door, window or the like, these locking members being integral with either an actuating rod or two actuating rods moving in opposite direction, sliding behind a head plate, this fitting being provided, moreover, with a solid profile having at least two vertical channels extending parallel to one an-
 25 other, over the full height of the door, window or the like, one of which serves as housing for the espagnolettes or espagnolettes-locks and the second one as housing for the head plate and/or the rod or rods.
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The advantages obtained thanks to this invention essentially consist in that the fitting requires a reduced construction and mounting time whilst maintaining the advantages of the single casing containing either the locking members, the actuating rods and the espagnolette or espagnolette-lock or the keepers co-operating with
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the locking members.

This fitting can, furthermore, be arranged on the edge of the leaf and the sash-frame of the door or window whilst avoiding the machining of same.

- 5 The invention is further explained below with reference to drawings showing only one embodiment.

Figure 1 is a schematic and perspective view of part of the fitting according to the invention.

- Figure 2 is a bird's eye and cross-sectional view according to the
10 line II-II of figure 1 of the profiles containing the keepers or the espagnolette or espagnolette-lock, the rod or rods and the head plate, respectively, according a first embodiment.

Figure 3 shows, in a way analogous to figure 2, the profiles according to a second embodiment.

- 15 Figure 4 is a bird's eye and cross-sectional view, according to line IV-IV of Figure 1, of the profiles shown in figure 3.

Reference is made to figure 1.

- The fitting 1 comprises at least an espagnolette or espagnolette-lock 2. Figure 1 more particularly shows an espagnolette-lock. This
20 latter comprises two locking members, viz. a dead bolt 3 and a half-turn bolt 4. A user may act on the half-turn bolt 4 by means of an actuating square 5 integral with a handle or an actuating knob (not shown) and introduced into an opening provided in the inner face 6 of the fitting 1. A drum lock allows to actuate, by
25 means of a key, the dead bolt 3 to bring same into a protruding position or at the same level with respect to the front edge 7 of the fitting 1. This latter comprises, on its inner face 6, a passage 8 capable of receiving the drum.

- The espagnolette-lock 2 comprises, moreover, several other locking
30 members 9, 10 integral with actuating rods 11, 12 arranged behind a head plate 13 fixed onto the front edge 7 of the fitting 1. The espagnolette-lock 2 allows to grant these actuating rods 11, 12 a vertical movement in opposite direction with respect to each other. In order to allow the vertical movement of the locking members 9,
35 10, the head plate 13 has elongated slots 14, 15 the length of which is slightly larger than the stroke of the locking members 9, 10.

In figure 1 is shown an espagnolette-lock 2 provided with two actu-

ating rods 11, 12; it is however obvious that the fitting 1, according to the invention, can comprise only one actuating rod provided with several locking members. Similarly, this figure 1 shows only part of the fitting 1 and the actuating rods 11, 12 may comprise several locking members 9, 10 distributed over the full height of the door or window.

According to the invention, the fitting 1 comprises a profile having at least two vertical channels 17 and 18 extending over the full height of the door, window or the like, one of which serves as housing for the espagnolettes or espagnolettes-locks 2 and the second one as housing for the head plate 13 and/or the actuating rod or rods 11, 12.

Figure 2 is a cross-sectional view of a profile 16 according to a first embodiment. This profile 16 has a "U"-shaped cross-section formed by two parallel legs 19, 20 connected by a bottom 21. The legs 19, 20 form the inner face 6 and the outer face 22 of the fitting 1, respectively (see figure 1). The profile 16 also comprises an inner partition 23 serving as reinforcement. This partition 23 can extend over the full length of the profile 16 or have interruptions, viz. in the area of the espagnolette or espagnolettes or espagnolette-lock or espagnolettes-locks 2, allowing the passing-through and the insertion of same into the profile 16. Hence, the inner walls 24, 25, 26 of the legs 19, 20 and the bottom 21, respectively, form the channel 17 serving as housing for the espagnolettes or espagnolettes-locks 2 in the profile 16.

Furthermore, the legs 19, 20 have, at their free end 27 and on the inner walls 24, 25, a shoulder 28. The space defined by the legs 19, 20 and the thrust plane 29 of the shoulders 28 corresponds to the channel 18 forming the housing for the head plate 13.

According to a feature of the invention, the profile 16 may comprise either means for the fixing in application against the leaf of the door or window or means for the fixing onto the edge of the leaf. For the fixing in application, openings are made in the legs 19, 20 serving as passage for fixing organs, such as screws or the like. Similarly, for the fixing onto the edge of the leaf, openings are made in the inner partition 23 and the bottom 21 of the profile 16, these openings serving also as passage for said fixing organs. The inner space 34 of the tubular profile 31 forms the channel 17

to lodge the espagnolette or espagnolettes or espagnolette-lock or espagnolettes-locks 2. For this purpose, the partition 33 has interruptions in the area of the espagnolettes or espagnolettes-locks 2, such as shown in figure 3, allowing the insertion of same into the tubular profile 31. The channel 18, serving as housing for the head plate 13, but also for the rods 11, 12, is formed by the inner walls 35, 36 of the legs 37, 38 of the "U"-shaped profile 32 and the side 39 of the partition 33, respectively. Alike before, the legs 37, 38 of the "U"-shaped profile 32 have, at their free end 40, a shoulder 41 capable of receiving the head plate 13.

This profile 30 can also comprise means for the fixing in application or onto the edge of the leaf of the door or window. For the fixing in application or onto the edge, openings across the sides 42, 42 of the profile 30 or openings machined in the partition 33 and the side wall 44 of the tubular profile 31, respectively, are made. These openings serve as passage for fixing organs, such as screws or the like.

The advantages of the fixing of the profile 16 or 30 onto the edge of a door or window essentially reside in that this door or window requires no previous machining to lodge the espagnolette or espagnolettes or espagnolette-lock or espagnolettes-locks 2 as well as the rod or rods 11, 12 and the head plate 13. There is also a material saving as far as the door or window is concerned. Same can indeed be reduced by a width corresponding to the width 45 of the profile 16 or 30.

In the case of a fixing in application of these profiles 16 or 30 against the inner face of a leaf of a door or window, it can prove to be judicious to receive the openings or the fixing organs located on the leg 19 of the profile 16 or on the side 42 of the profile 30. For this purpose, the profiles 16 or 30 comprise, on the leg 19 or on the side 42, respectively, means 46 to insert or to nest a cap 47 covering the openings or fixing organs.

According to an embodiment, these means 46 are comprised of grooves 48 located on the longitudinal edges 49, 50 of a recess 51 machined in the outer face of the leg 19 of the profile 16 or in the side 42 of the profile 30. This recess 51 extends over the full length of the profile 16 or 30. Into these grooves are inserted tongues 52 located on the longitudinal edges of the cap 47. This latter may be

formed by a plate of metal, plastic or the like. If the cap is made of a rigid material, it will be convenient to insert the tongues 52 into the grooves 48 during the mounting of the fitting 1. On the other hand, if the cap 47 is made of a flexible material, the
5 tongues 52 can be nested in the grooves 48 under the action of a pressure exerted onto the cap 47. It is obvious that the profile 16 or 30 may comprise several caps 47 of different size, look and colour.

The fitting 1 should offer a high degree of safety against eventual
10 house-breakings. Now, the boring of the leaf of the door or window and of the profile 16 or 30 in the area of the espagnolette or espagnolette-lock 2 very often allows to actuate same. To cope with this trouble, the profile 16 or 30 may comprise a reinforcement in the area of the espagnolette or espagnolette-lock 2. This rein-
15 forcement is preferably formed by a plate, made of a highly boring-safe material, fixed onto the inner wall 25 of the leg 20 of the profile 16 or onto the inner wall 56 of the side 43 of the profile 30.

The fitting 1 also comprises keepers co-operating with the locking
20 members 9, 10 arranged on the rods 11, 12 as well as with the dead bolt 3 and the half-turn bolt 4.

The keepers shown in figure 1 are formed by openings 53, 54 machined in a profile 55. The openings 53 are capable of receiving the locking members 9, 10 and the openings 54 are adequated to the
25 shape of the dead bolt 3 and the half-turn bolt 4. The profile 55 may be fixed either onto the edge or in application against the sash-frame of the door, window or the like.

C L A I M S

1. Fitting (1) for a door, window or the like, comprising at least an espagnolette or espagnolette-lock (2) provided with several vertically moving locking members (9, 10) co-operating with keepers
5 arranged on the sash-frame of the door, window or the like, these locking members (9, 10) being integral with either an actuating rod or two actuating rods (11, 12) moving in opposite direction, sliding behind a head plate (13), characterized in that it comprises a solid profile (16, 30) having at least two vertical channels (17,
10 18) extending parallel to one another, over the full height of the door, window or the like, one of which serves as housing for the espagnolettes or espagnolettes-locks (2) and the second one as housing for the head plate (13) and/or the rod or rods (11, 12).
2. Fitting (1) according to claim 1, characterized in that the pro-
15 file is a profile (16), with a "U"-shaped cross-section, formed by two legs (19, 20) connected by a bottom (21) and having an inner partition (23) serving as reinforcement.
3. Fitting (1) according to claims 1 and 2, characterized in that the channel (17) is formed by the inner walls (24, 25, 26) of the
20 legs (19, 20) and the bottom (21), respectively.
4. Fitting (1) according to claims 1 and 2, characterized in that the legs (19, 20) have, at their free end (27) and on the inner walls (24, 25) a shoulder (28), the channel (18) forming the housing for the head plate (13) being formed by the legs (19, 20) and
25 the thrust plate (29) of these shoulders (28).
5. Fitting (1) according to claim 1, characterized in that the profile is a profile (30) formed by the combination of a tubular profile (31) with a rectangular cross-section and a "U"-shaped profile (32), a partition (33) simultaneously forming the bottom of the
30 "U"-shaped profile (32) and a side wall of the tubular profile (31).
6. Fitting (1) according to claims 1 and 5, characterized in that the channel (17) is formed by the inner space (34) of the tubular profile (31) with rectangular cross-section and the channel (18),
35 serving as housing for the head plate (13) and the rod or rods (11, 12), is formed by the inner walls (35, 36) of the legs (37, 38) of the "U"-shaped profile (32) and the side (39) of the partition (33), respectively.



7. Fitting (1) according to claims 1, 2 and 5, characterized in that the profiles (16, 30) comprise means for the fitting in application against the inner face of the leaf of the door, window or the like or means for the fixing onto the edge of the leaf.

5 8. Fitting (1) according to claim 7, characterized in that the means for the fitting in application or onto the edge of the leaf of the profile (16) are formed by openings made in the legs (19, 20) and serving as passages for the fixing organs, such as screws and the like, or by openings machined in the inner partition (23)
10 and the bottom (21), also serving as passage for said fixing organs.

9. Fitting (1) according to claim 7, characterized in that the means for the fitting in application or onto the edge of the leaf of the profile (30) are formed by openings across the sides (42,
15 43) or openings machined in the partition (33) and the side wall (44) of the tubular profile (31) with rectangular section, these openings serving as passage for the fixing organs, such as screws or the like.

10. Fitting (1) according to claims 2 and 5, characterized in that
20 the profiles (16, 30) comprise, on the leg (19) or the side (42), respectively, means (46) to insert or to nest a cap (47) covering the openings or fixing organs, these means (46) being formed by grooves (48) located on the longitudinal edges (49, 50) of a recess (51) machined in the outer face of the leg (19) of the profile (16)
25 or in the side (42) of the profile (30) and co-operating with tongues (52) located on the longitudinal edges of the cap (47) formed by a plate of rigid or flexible material, inserted or nested into the grooves (48).

11. Fitting (1) according to claims 2 and 5, characterized in that
30 the profiles (16, 30) comprise a reinforcement in the area of the espagnolette-lock or espagnolettes-locks (2), this reinforcement, formed by a plate, made of a highly boring-safe material, being fixed onto the inner wall (25) of the leg (20) of the profile (16) or onto the inner wall (56) of the side (43) of the profile (30).

35 12. Fitting (1) according to claim 1, characterized in that it comprises a profile (55) in which are housed or machined the keepers, this profile (55) comprising means for the fixing in application or onto the edge of the sash-frame of the door, window or the like.

