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(12) # EUROPEAN PATENT SPECIFICATION

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GB-A- 2 076 455

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EP 0 241 245 B1

Description

The invention relates to a handle for a closure, particularly an espagnolette handle for a closure such as a window.

GB-A 2 076 455 discloses a window fastener comprising a handle pivotably mounted on an escutcheon plate, and a locking bolt comprising a trigger grip arrangement located in the handle so that when the trigger grip is squeezed a bolt is drawn away from the escutcheon plate into the handle.

GB-A 2 076 455 thus relies on squeezing of a trigger to operate it, which can be a difficult operation for an elderly or infirm person, and in any event leaves an exposed and thus unsightly hole in the escutcheon plate when the handle is pivoted from the locked position.

It is accordingly an object of the invention to seek to mitigate these disadvantages. This is achieved in a handle according to claim 1.

The latch may have a curved cam surface at its free end for facilitating movement of the handle thereover when the handle is moved from an open to the locked position.

The lockable handle may include lock means to lock the plunger in at least one operative position.

The lock means may be situated in the plunger.

The lockable handle may include a cover plate for a securing means of the escutcheon plate.

It will be understood that the handle extends to a closure including a lockable handle as hereinbefore described mounted thereon.

A lockable handle for an espagnolette of a window is diagrammatically illustrated, by way of example, with reference to the accompanying drawings.

Fig. 1 is a perspective view of a handle according to the invention;

Fig. 2 is a side view of a locking bolt of the handle of Fig. 1;

Fig. 3 is a side view of a plunger of the handle of Fig. 1;

Fig. 4 is a plan view of the plunger, taken on arrow 'A' on Fig. 3;

Fig. 5 is a side elevational view of a second handle according to the invention;

Fig. 6 is an underneath view of the handle of Fig. 5;

Fig. 7 is a part fragmentary view of the handle of Fig. 5 showing an escutcheon plate removed;

Fig. 8 is a plan view showing the handle of Fig. 5 is an open or unlocked position of the closure;

Fig. 9 is an underneath view showing the handle of Fig. 5 in an open or unlocked position of the closure;

Fig. 10 is a side elevational view showing the handle of Fig. 5 in the open position of Figs. 8 and 9;

Fig. 11 is a plan view of a third handle according to the invention; and

Fig. 12 is a side elevational view partly in phantom of the handle of Fig. 12.

Referring firstly to Figs. 1 to 4 of the drawings, a lockable handle 1 for an espagnolette fastening has a hand-grip part 2 offset from a boss or body 3 in which a plunger 4 is mounted in a suitable bore. The boss 3 mounts a rod 5, from a nose 6, for connection with the espagnolette, which rod 5 passes through an escutcheon plate 7. The bottom of the boss 3 adjacent the escutcheon plate 7 is closed by a plate which has a hole through which a finger 8 of the plunger can pass. The plunger 4 is normally arranged so that a spring 9 bearing on the plate keeps the plunger 4 raised so the finger 8 is clear of the hole, and so that the opposite end 4a projects out of the boss 3 adjacent the hand-grip part 2. The plunger is held captive in the bore.

The escutcheon plate 7 mounts a latch or a locking bolt 10 under pressure of resilient means such as a coil spring 12, the bolt 10 being usually clear of the escutcheon plate 7 as shown, and being generally square, with a chamfered edge, cam surface or corner 11 near the 'nose' 6.

In the open condition shown, the bolt 10 projects out of the escutcheon plate 7. To close a closure to which the handle 1 is fitted, the hand-grip part 2 is gripped and turned in the direction 'X', Fig. 1, so that the boss 3 rides over the chamfered edge part 11 and forces the bolt 10 into the escutcheon plate 7 against the spring until the hole and bolt 10 are aligned, when the bolt is urged into the hole by a spring 12, thus holding the handle locked shut.

In order to open the closure, the plunger 4, 4a is depressed so that the plunger 8 engages the bolt 10 and pushes it level with or below the plane of separation between the bottom and face of the plate so that it is just clear thereof. The handle can then be turned to the position shown.

Referring to Figs. 5 to 10 of the drawings, there is shown an espagnolette handle 10 which is a lockable handle for a closure, comprising a handle with hand grip means 102 and a manually operable depressible mechanism 103 which can be operated to unlock the handle 102 for operating the closure (not shown).

The handle 102 has an enlarged part 104 in which is housed captive in a bore under spring pressure a manually depressible means in the form of a plunger 105. The handle 102 is connected via a pivot axis 106 with an escutcheon plate 107 which is secured in use via securing means such as screws (not shown) in screw holes 108 with a closure such as a casement window. Between a boss 109 and one screw hole 108 is a latch 110 which is mounted in an orifice 111 of the escutcheon plate 107 under pressure of a biassing means such as a spring, the spring being between a plate 112 of the escutcheon plate 107 and the underside of the latch 110. The latch 110 has a curved cam surface 113 to facilitate riding of a follower 114 of the handle over the latch 110 to depress it into the hole 111 until it can spring into a hole 115 in the handle 102 when the holes 111 and 115 become aligned axially to lock the handle closed.

To open the handle, or unlock it, it is only necessary to depress the plunger 105 in the Fig. 5 position in which the latch 110 is in the hole 115, being aligned therewith, and turn the handle so that when the plunger 105 depresses the latch to or below the plane of separation between the handle and escutcheon plate, the handle can be turned, to oper-

ate locking mechansim of the closure connected with the axis.

When the handle is returned to the locked position, the latch automatically latches into the hole to lock the handle closed. The other hole 108 is covered by a plate 117 to seek to obviate removal by a vandal.

Referring now to Figs. 11 and 12, the handle 201 shown is identical to the embodiments shown in Figs. 5 to 10 so like parts are identified by like numerals. The handle 201 is modified in that the plunger 105 is itself lockable by a key (not shown) in either the open or closed condition of the handle 201. This is accomplished by the enlarged part 104 or boss surrounding the bore 202 in which the plunger 105 is captive having two spaced slots or recesses 203 and 204 corresponding to the open or closed position of the handle. The plunger 105 incorporates a key slot 205 and barrel 206 which has a cam for retracting a slide 207 which is mounted transversely in a blind slot 208 in the plunger under pressure of resilient means such as a coil spring 209. The slide is normally urged by the spring to engage either the recess or the slide so that depending on whether the plunger is depressed or not, the plunger is locked in one or other position of the handle, that is locked or unlocked. When the key is inserted in the key slot 205 and turned, it in turn turns the barrel 206 to rotate the cam and act on the slide 207 to retract it to the left (as viewed) out of the particular recess 203 or 204 in which the slide is received so that the handle 201 can be operated to open or close the closure.

The lock may be spaced from the plunger in the handle and arranged to lock it in the open and/or closed condition.

It will be understood that there may only be the lower (as viewed) recess 204 so that the handle 201 can be locked in the closed position. Both the embodiments provide additional security, and ease of use.

The handles shown herein can have a locking nib, instead of the rod 5 or 106 for an espagnolette.

Claims

1. A lockable handle for closure, comprising an escutcheon plate, a handle pivotably mounted with the escutcheon plate for movement between two end positions in one of which the closure in use is secured, and a manually operable mechanism for latching the handle in the secured position, characterised by the manually operable mechanism (4, 105, 10, 110) comprising a plunger (4) depressible under thumb pressure and a latch (10, 110) mounted in the escutcheon plate (107) under pressure of biassing means (12) for urging the latch (10, 110) to engage in a facing orifice of the handle (1, 101, 201), and by the plunger being depressible to engage the latch (10, 110) and move it against the biassing means (12) clear of the orifice so that the handle is movable from the one to the other end position.

2. A lockable handle according to Claim 1, characterised by a curved cam surface (11, 113) of the latch (10, 110) for facilitating movement of the handle (1, 101, 201) thereover when the handle is moved from an open to the secured position.

3. A lockable handle according to Claim 2, characterised by lock means (205) to lock the plunger (105 in at least one operative position.

4. A lockable handle according to Claim 3, characterised in that the lock means (205) is situated in the plunger (105).

5. A lockable handle according to Claim 4, characterised in that the lock means (205) comprises a key-operable barrel (206) and a retractable slide (207), and in that the handle (102) includes a blind recess (203, 204) in which the slide (207) is receivable.

6. A lockable handle according to any preceding Claim, characterised by a cover (117) for a securing means (108) of the escutcheon plate.

Patentansprüche

1. Verriegelbarer Handgriff für eine Verschließeinrichtung mit einer Deckplatte, einem schwenkbar mit der Deckplatte verbundenen Handgriff, der zwischen zwei Endstellungen verschwenkbar ist, in deren einer die Verschließeinrichtung bei Gebrauch festgelegt ist, sowie mit einer handbetätigbaren Einrichtung zum Verriegeln des Handgriffs in der festgelegten Stellung, dadurch gekennzeichnet, daß die handbetätigbare Einrichtung (4, 10, 105, 110) einen Kolben (4), der unter Daumendruck eindrückbar ist, sowie einen Riegel (10, 110) aufweist, die in der Deckplatte (107) unter Druck einer Belastungseinrichtung (12), die den Riegel (10, 110) in Eingriff mit einer gegenüberliegenden Öffnung des Handgriffs (1, 101, 201) drückt, angebracht ist, und daß der Kolben eindrückbar ist, um in Eingriff mit dem Riegel (10, 110) zu kommen und diesen gegen die Belastungseinrichtung (12) aus der Öffnung herauszuschieben, so daß der Handgriff aus der einen in die andere Endstellung schwenkbar ist.

2. Verriegelbarer Handgriff nach Anspruch 1, gekennzeichnet durch eine gekrümmte Führungsfläche (11, 113) des Riegels (10, 110) zur Erleichterung des Schwenkens des Handgriffs (1, 101, 201) über dieselbe, wenn der Handgriff aus einer offenen in die festgelegte Stellung verschwenkt wird.

3. Verriegelbarer Handgriff nach Anspruch 2, gekennzeichnet durch eine Verriegelungseinrichtung (205) zum Verriegeln des Kolbens (105) in wenigstens einer Arbeitsstellung.

4. Verriegelbarer Handgriff nach Anspruch 3, dadurch gekennzeichnet, daß die Verriegelungseinrichtung (205) im Kolben (105) angeordnet ist.

5. Verriegelbarer Handgriff nach Anspruch 4, dadurch gekennzeichnet, daß die Verriegelungseinrichtung (205) einen schlüsselbetätigbaren Zylinder (206) und ein zurückziehbares Gleitstück (207) aufweist, und daß der Handgriff (102) eine blinde Ausnehmung (203, 204) enthält, in welcher das Gleitstück (207) aufnehmbar ist.

6. Verriegelbarer Handgriff nach einem der vorangehenden Ansprüche, gekennzeichnet durch eine Abdeckung (117) für eine Befestigungseinrichtung (108) der Deckplatte.

Revendications

1. Une poignée verrouillable pour fermeture, comprenant une plaque d'entrée, une poignée articulée avec la plaque d'entrée pour se déplacer entre deux positions extrêmes dans l'une desquelles la fermeture est assurée en utilisation, et un mécanisme actionnable à la main pour bloquer la poignée dans la position assurée, caractérisée en ce que le mécanisme actionnable à la main (4, 105, 10, 110) comprend un plongeur (4) pouvant être enfoncé sous la pression du pouce et un cliquet (10, 110) monté dans la plaque d'entrée (107) sous la pression de moyens de sollicitation (12) pour pousser le verrou (10, 110) à s'engager dans un orifice lui faisant face de la poignée (1, 101, 201) et en ce que le plongeur peut être enfoncé pour venir en contact avec le cliquet (10; 110) et le déplacer en s'opposant aux moyens de sollicitation (12) afin de l'écarter de l'orifice pour que la poignée puisse être déplacée de l'une à l'autre positions extrêmes.

2. Une poignée verrouillable selon la revendication 1, caractérisée par une surface de came courbe (11, 113) du cliquet (10, 110) permettant de faciliter le mouvement de la poignée (1, 101, 201) par dessus lorsque la poignée est déplacée d'une position ouverte à la position assurée.

3. Une poignée verrouillable selon la revendication 2, caractérisée par un moyen de verrouillage (205) permettant de verrouiller le plongeur (105) dans au moins une position de fonctionnement.

4. Une poignée verrouillable selon la revendication 3, caractérisée en ce que le moyen de verrouillage (205) est situé dans le plongeur (105).

5. Une poignée verrouillable selon la revendication 4, caractérisé en ce que le moyen de verrouillage (205) comprend un barillet (206) à clé et un coulisseau rétractable (207), et en ce que la poignée (102) comprend un logement borgne (203, 204) dans lequel peut être reçu le coulisseau (207).

6. Une poignée verrouillable selon une revendication précédente quelconque, caractérisée par un couvercle (117) pour un moyen de fixation (108) de la plaque d'entrée.

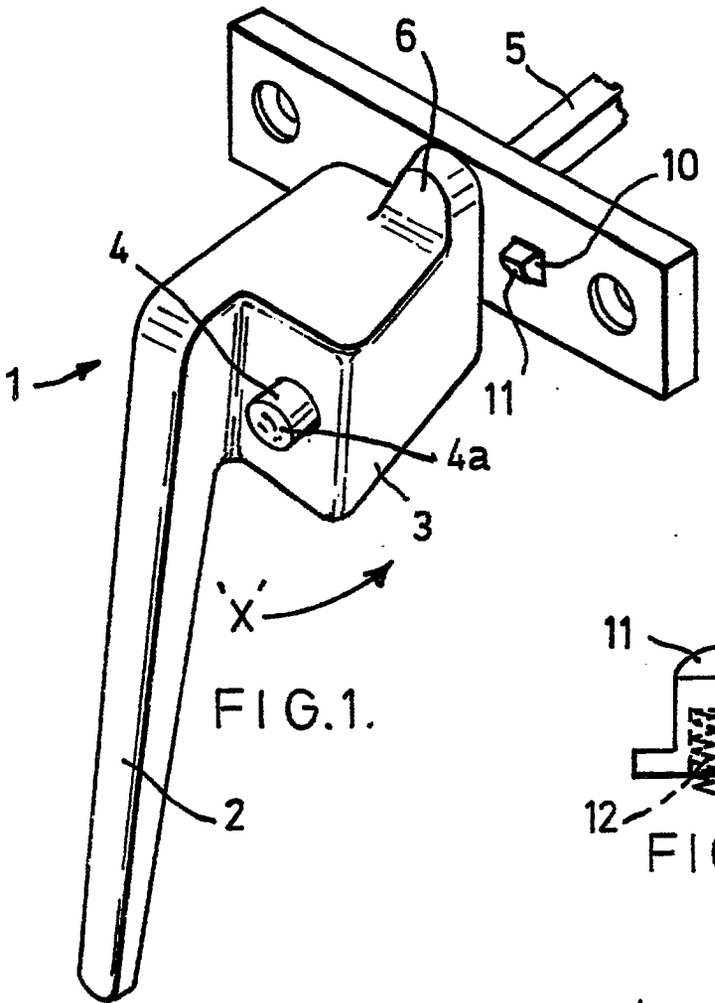


FIG.1.

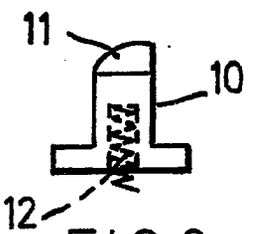


FIG.2.

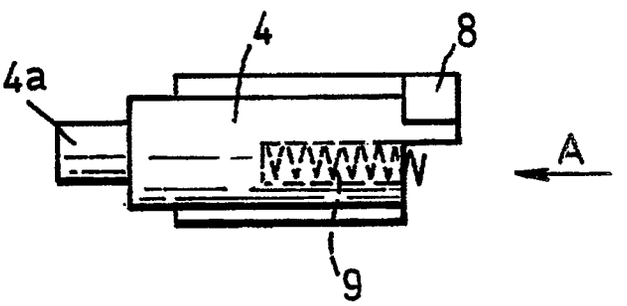


FIG 3

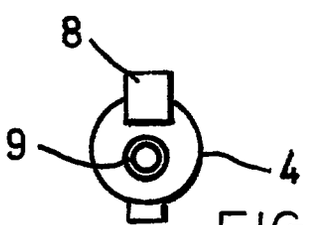


FIG. 4.

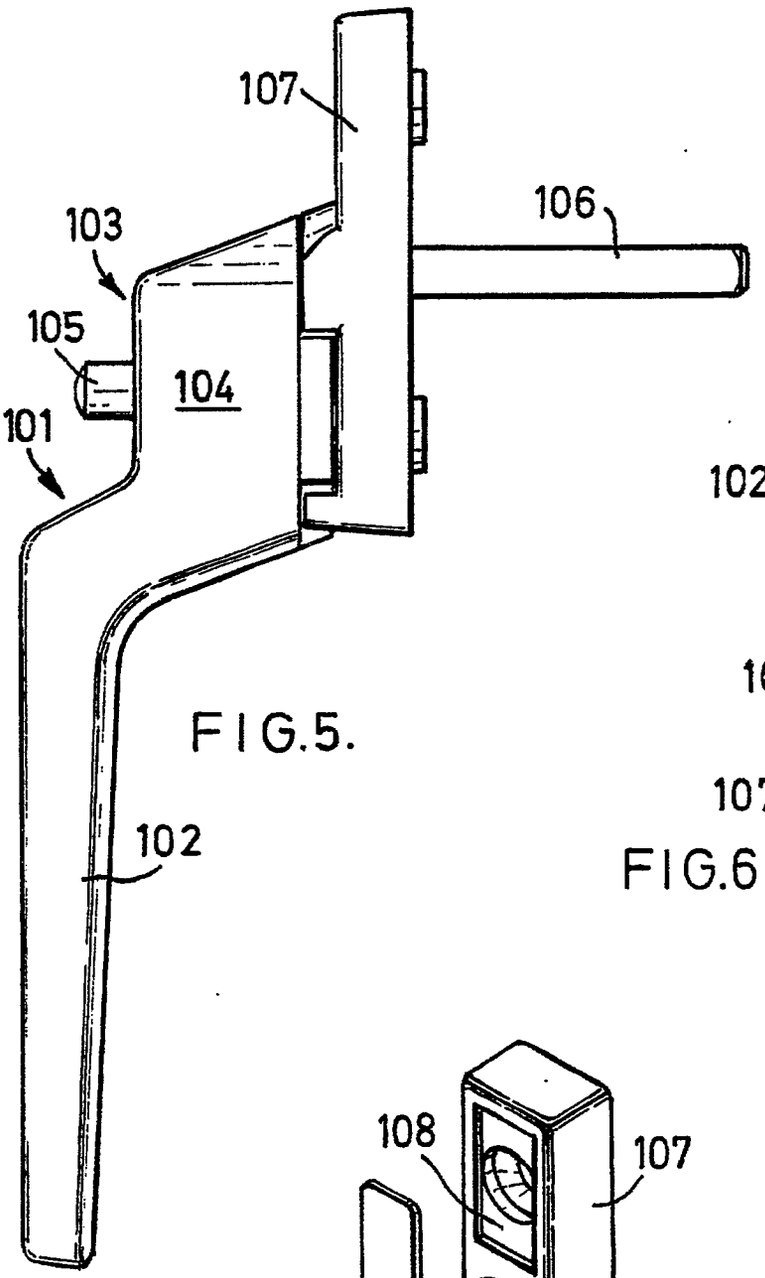


FIG.5.

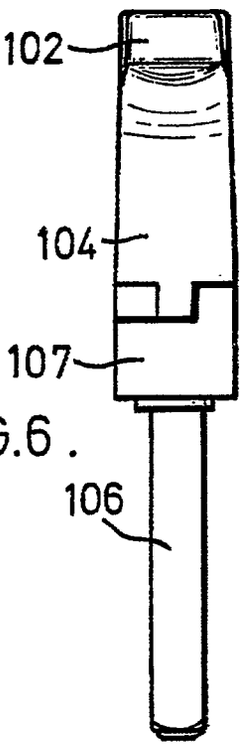


FIG.6.

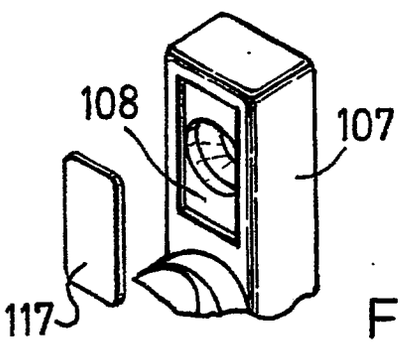


FIG.7.

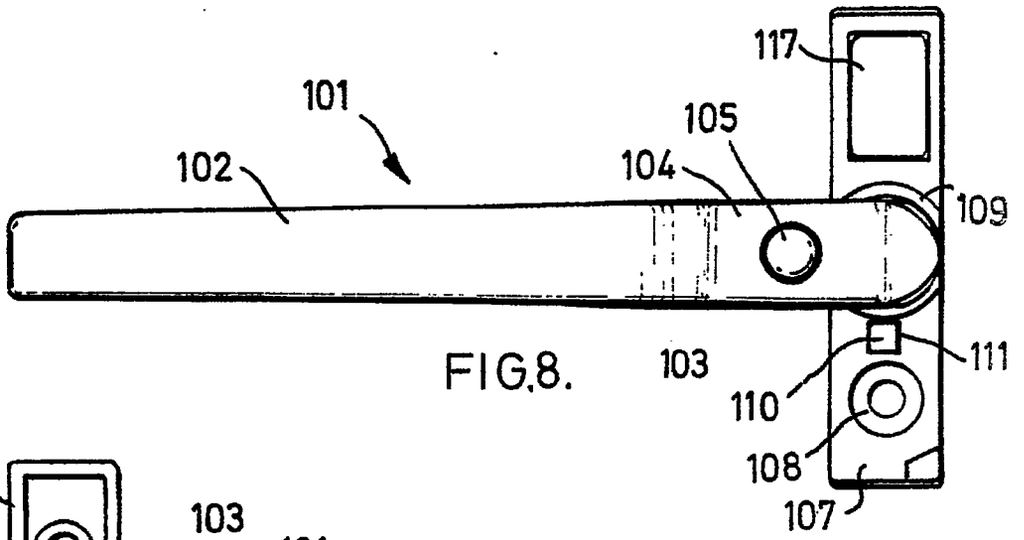


FIG.8.

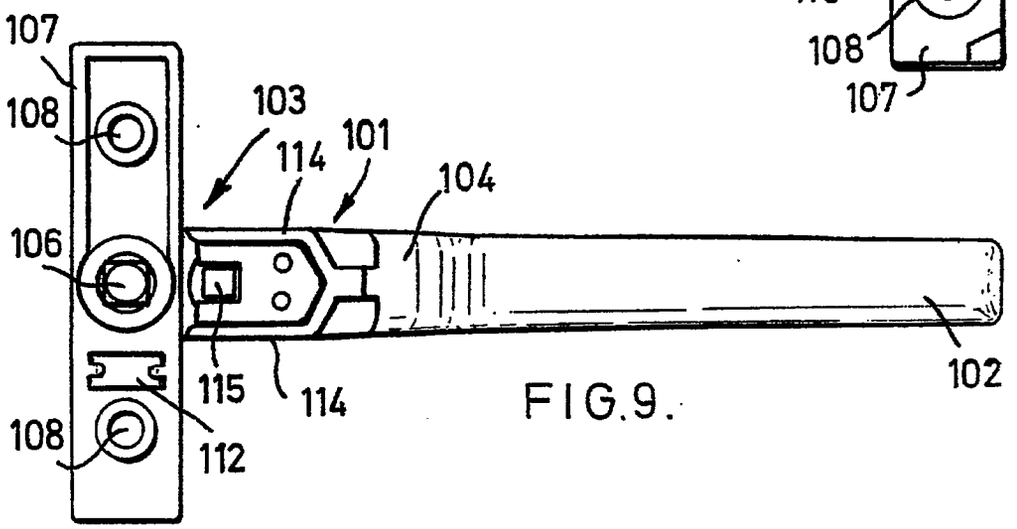


FIG.9.

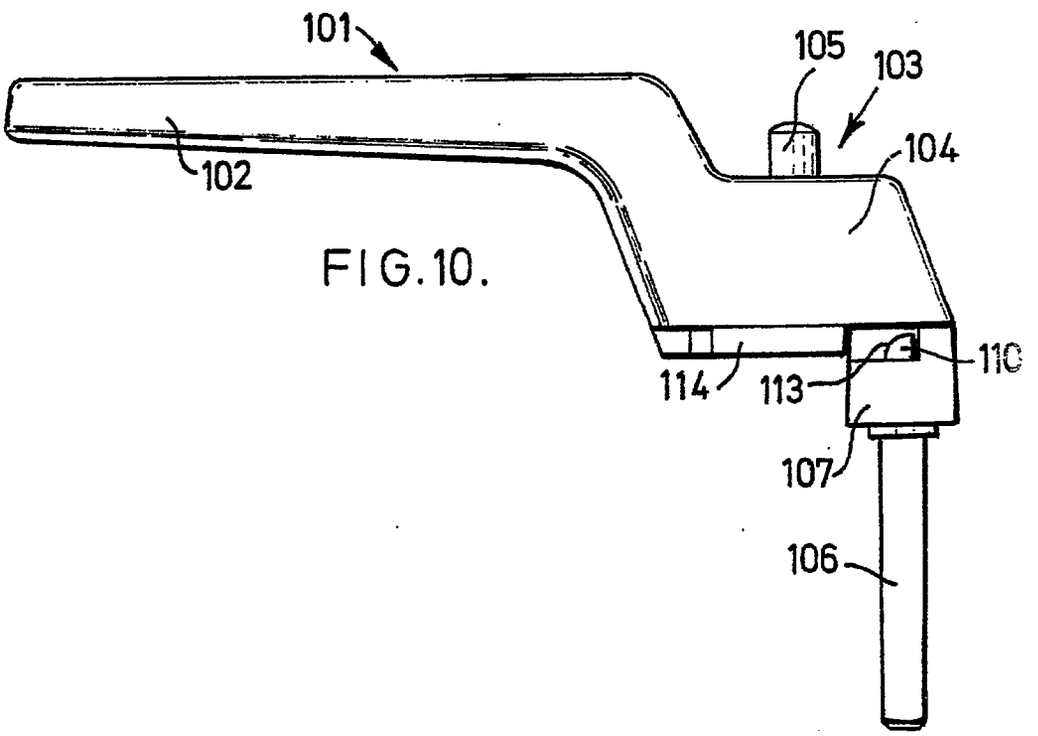


FIG.10.

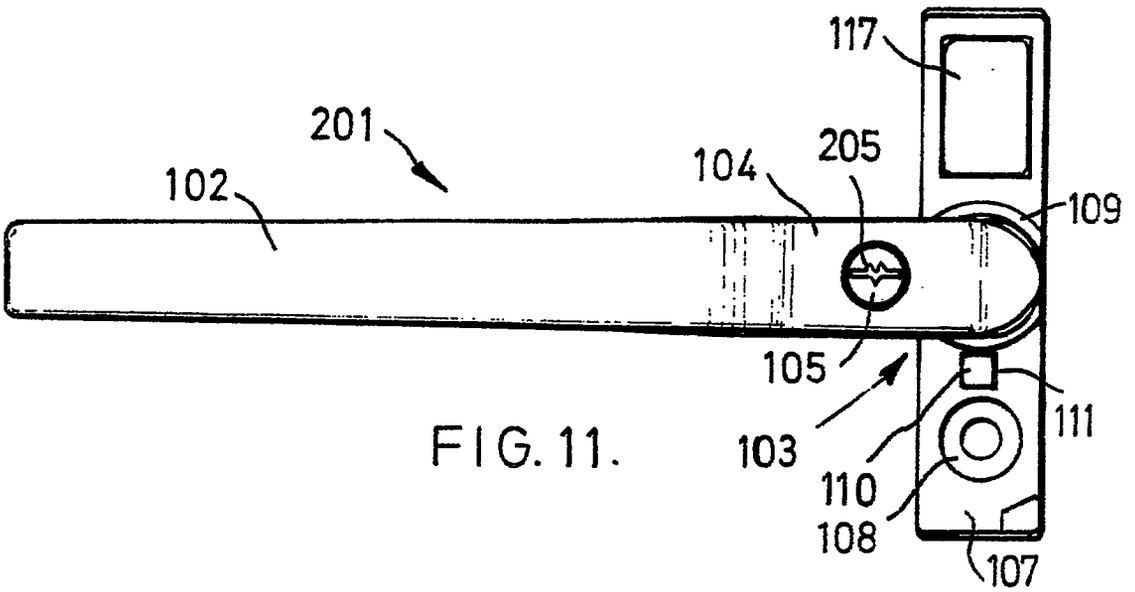
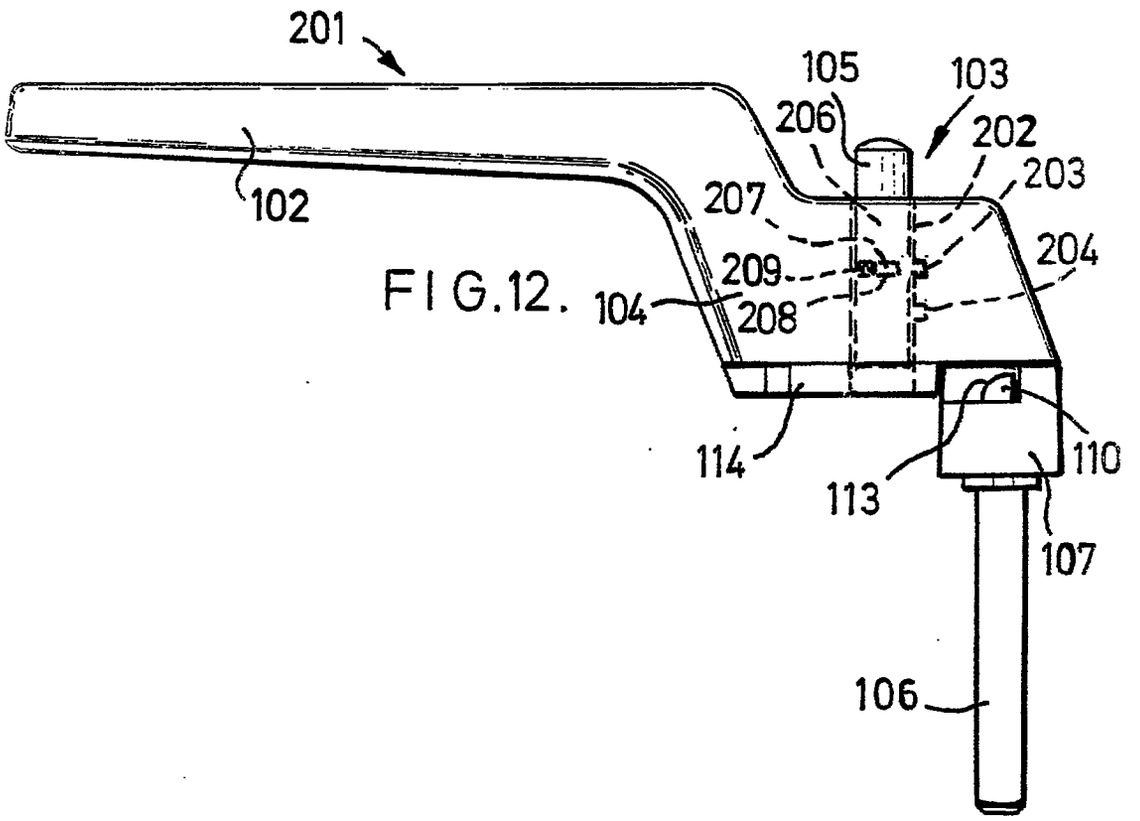

117
201
205
104
102
109
105
111
103
110
108
107

FIG. 11.


201
105
103
206
202
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102
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FIG. 12.