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(54) **Cordlock**

Seilklemme

Dispositif de blocage de corde

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Description

[0001] The invention relates to a cordlock for a vertically displaceable window covering.

[0002] Existing cordlock systems have the drawback that when the lock is set into operation the window covering drops downward a determined distance before locking of the cord takes place. This property is undesirable since the locked situation of the window covering is hereby difficult to determine exactly. This dropping back of the window covering is particularly undesirable in the fully opened position because of the increase in the height of the lifted components.

[0003] In US-A-2.674.350 a cordlock is disclosed comprising:

- a locking body provided with a clamping member for clamping said cord in a clamping position and provided with a guide for guiding said cord, said guide being connected to the clamping member; and
- a housing accommodating the locking body and having a counter clamping member forming part thereof for co-action with the clamping member, said housing being provided with an inlet, and an outlet for passage of the cords.

[0004] It is an object of the present invention to provide an improved cordlock of the above stated type with which dropping back of the window covering after activation of the lock is reduced to a minimum. The present invention has the further object of providing a cordlock which functions in operationally certain manner, is simple to install and replace and which can also be used in different positions.

[0005] The present invention provides a cordlock for locking one or more cords of a vertically displaceable window covering, comprising:

- a locking body provided with a clamping member for clamping said cord in a clamping position and provided with a guide for guiding said cord, said guide being connected to the clamping member; and
- a housing accommodating the locking body and having a counter clamping member forming part thereof for co-action with the clamping member, said housing being provided with an inlet, and an outlet for passage of the cords, **characterized in that** said locking body is enclosed in and lies unattached within the housing body, such that it is freely displaceable along a contact surface between a release position wherein the cords are unlocked and a locking position wherein the cord is clamped between the clamping member and the counter clamping member.

[0006] The cordlock according to the present invention comprises a small number of moving parts, is therefore relatively simple to assemble and relatively inexpensive to manufacture. Further it is an advantage that when a window covering is pulled up without conscious release of the locking body, the lock releases automatically due to the clamping member rolling off over the counter clamping member which prevents excessive wear to the cord.

[0007] Finally, it is possible using this lock to block a cord without the window covering being therein displaced. This direct method of blocking enables accurate placing of the window covering in a desired position, which is particularly advantageous in a fully opened or pulled-up position.

[0008] A preferred embodiment of the cordlock is formed in that the clamping members comprise a profiled surface and/or a rough surface. These steps increase the clamping ability of the clamping member and the counter clamping member.

[0009] The inner surface of the housing preferably comprises a contact surface for co-action with the clamping member. The contact surface guides the clamping member to the counter clamping member such that the clamping action of the clamping member and the counter clamping member is thereby increased.

[0010] The contact surface preferably comprises a rough surface and/or has a surface provided with a profile. These steps result in optimum contact between the contact surface and the clamping member.

[0011] The inside of the housing preferably comprises a curved guide surface for co-action with the locking body. The freedom of movement of the locking body in the housing is partly determined by this curved surface. The curved surface herein provides a rotation of the locking body during translating thereof.

[0012] In a preferred embodiment the locking body comprises a projecting part. Due to the engagement of the cord on this projecting part a lever action is obtained whereby the position of the locking body can be changed relatively simply.

[0013] Yet another preferred embodiment is characterized in that the guide of the locking body is connected to the clamping member with interposing of an arm. The force exerted on the guide by the cord is now transferred to the clamping member via a lever. This step also enhances the clamping action of the cordlock.

[0014] The outside of the housing is preferably provided with channels for fixing the cordlock into two profile beams slidable relative to each other in lengthwise direction. This construction enables simple assembly and/or disassembly of the cordlock.

[0015] The present invention will be further elucidated with reference to the non-limitative embodiments shown in the following figures. Herein:

fig. 1 shows a perspective view of a vertically displaceable window covering provided with a cordlock according to the invention,

fig. 2 is a perspective, partly cut away view of a cordlock as applied in fig. 1,
fig. 3 and 4 show cut away top views of the cordlock as shown in fig. 1 and 2 respectively in release and clamping position,
fig. 5 is a perspective view of a cordlock in vertical position,
fig. 6 is a perspective view of the cordlock of fig. 5 in exploded situation, and
fig. 7 is a partly cut away view of a cordlock as shown in fig. 5 and 6 mounted in two profile beams.

[0016] Fig. 1 shows a window covering 1 which is vertically displaceable relative to a profile beam 2 in which is arranged a cordlock 3 according to the invention. (Partial) opening and closing of window covering 1 takes place by manipulating a cord 4.

[0017] Fig. 2 shows a cordlock 3 in partly cut-away view. The outside of cordlock 3 is formed by a housing body 5 and a housing cover 6. These can be mutually fixed by means of form-fitting elements 7. In situations where cordlock 3 will be loaded to an extreme extent it is possible to secure the cover 6 relative to body 5 by inserting a bolt (not shown) through openings 8, 9 in respectively cover 6 and body 5. A profiled counter clamping member 10 is connected to housing body 5. A locking body 11 lies unattached in the housing body 5. This locking body 11 comprises a guide 12 to which is fixed an arm 13, to which a clamping member 14 is fixed at a distance from the guide 12. The operation of cordlock 3 will be described with reference to the following figures.

[0018] Fig. 3 shows the cordlock 3 in release position. The locking body 11 freely movable in housing 5 is urged to the left because the cord 4 lies against a projecting part 15 of guide 12. The clamping member 14 fixedly connected to guide 12 is therefore also urged to the left, whereby it lies clear of a profiled contact surface 16. The clamping member 14 is also situated some distance from counter clamping member 10 so that the cord 4 can be moved therebetween without being impeded by the clamping member. In fig. 4 the cord is moved to the right relative to the position of the cord 4 shown in fig. 3. Cord 4 now lies otherwise against the guide 12 of locking body 11, whereby it is shifted relative to the position shown in fig. 3. The locking body 11 is translated some distance to the right but also rotated due to the presence of a curved guide surface 17 which forms part of the housing. The clamping member 14 thereby comes to lie against contact surface 16. Partly due to a corresponding profile on clamping member 14 and contact surface 16 a clamping force is exerted on cord 4 whereby it is clamped between clamping member 14 and counter clamping member 10. The latter is also provided with a profiled surface; this increases the clamping ability of cordlock 3.

[0019] Fig. 5 shows the cordlock 3 in a vertical position and the arrangement of the cord 4 in cordlock 3 will be described with reference to this figure. Using for instance a pin, the cord 4 is first inserted through a first and second opening 18, 19 in the side walls of the housing body 5. The cord 4 is then placed through the second opening 19 in the wall of the housing body 5, then carried between the counter clamping member 10 and the clamping member 14 and placed through the guide 12 and eventually leaves the housing body 5 at an actuating opening 20. In short, this means that cord 4 can be arranged by means of two feeding movements.

[0020] Fig. 6 shows the above described components in exploded view, wherein the counter clamping member 10 can be fixed to housing body 5 by means of a shaft with internal screw thread 21. The figure also shows a bolt 22 which can be placed through the cover 6 and screwed into shaft 21. By means of this construction the counter clamping member can be fixed to housing body 5, but the cover 6 can also be secured relative to housing body 5.

[0021] Finally, fig. 7 shows in cut away view two profile beams 23, 24 which are slidable relative to each other and both provided with an insertion aperture (here on the underside) for receiving the cordlock 3. Fixing of the cordlock 3 in the profile beams 23, 24 takes place by sliding the profile beams 23, 24 relative to each other such that edges 25, 26 of the insertion apertures of profile beams 23, 24 engage in channels 27, 28 specially arranged for this purpose in the outside of housing body 5. The head end of profile beams 23, 24 is subsequently finished using a closing element 29.

Claims

1. Cordlock (3) for locking one or more cords (4) of a vertically displaceable window covering (1), comprising:

   - a locking body (11) provided with a clamping member (14) for clamping said cord in a clamping position and provided with a guide (12) for guiding said cord, said guide being connected to the clamping member (14); and
   - a housing (5) accommodating the locking body (11) and having a counter clamping member (10) forming part thereof for co-action with the clamping member (14), said housing (5) being provided with an inlet (18, 19), and an outlet (20) for passage of the cords,

   characterized in that said locking body (11) is enclosed in and lies unattached within the housing body (5), such that it is freely displaceable along a contact surface (16) between a release position wherein the cords (4) are unlocked and a locking position wherein the cord is clamped between the clamping member (10) and the counter clamping member (14).

2. Cordlock (3) as claimed in claim 1, characterized in that the clamping member (14) and counter clamping member (10) are each formed by a substantially cylindrical body (5).

3. Cordlock (3) as claimed in claim 1 and 2, characterized in that the clamping member (14) comprise a profiled surface.

4. Cordlock (3) as claimed in any of the foregoing claims, characterized in that the clamping member (14) and the counter clamping member (10) comprise a rough surface.

5. Cordlock (3) as claimed in any of the foregoing claims, characterized in that the inner surface of the housing (5) comprises a contact surface (16) for coaction with the clamping member (14).

6. Cordlock (3) as claimed in claim 5, characterized in that the contact surface (16) is profiled.

7. Cordlock (3) as claimed in claim 5, characterized in that the contact surface (16) comprises a rough surface.

8. Cordlock (3) as claimed in any of the foregoing claims, characterized in that the locking body (11) is provided with a projecting part (15).

9. Cordlock (3) as claimed in any of the foregoing claims, characterized in that the guide (12) of the locking body (11) is connected to the clamping member (14) with interposing of an arm (13).

10. Cordlock as claimed in any of the foregoing claims, characterized in that the outside of the housing (5) is provided with channels (27, 28) for fixing the cordlock into two profile beams (23, 24) slidable relative to each other in lengthwise direction.

Patentansprüche

1. Schnurklemme (3) zum Arretieren einer oder mehrerer Schnüre (4) einer vertikal bewegbaren Fensterjalousie (1), mit

   - einem Arretierkörper (11), der mit einem Klemmelement (14) zum Einklemmen der Schnur (4) in einer Einklemmstellung und einer Führung (12) zum Führen der Schnur (4) versehen ist, wobei diese Führung (12) mit dem Klemmelement (14) verbunden ist, sowie
   - einem den Arretierkörper (11) aufnehmenden Gehäuse (5), von dem ein Teil ein Gegenklemmelement (10) für das Zusammenwirken mit dem Klemmelement (14) bildet, wobei dieses Gehäuse (5) mit einer Einlaßöffnung (18, 19) und einer Auslaßöffnung (20) für das Hindurchziehen der Schnüre versehen ist,

   dadurch gekennzeichnet,
   daß der Arretierkörper (11) im Gehäuse (5) dergestalt eingeschlossen ist und lose in diesem liegt, daß er entlang einer Berührungsfläche (16) zwischen einer Lösestellung, bei der die Schnüre (4) entarretiert sind, und einer Arretierstellung, bei der die Schnur zwischen dem Klemmelement (14) und dem Gegenklemmelement (10) eingeklemmt ist, frei hin- und herbewegbar ist.

2. Schnurklemme (3) nach Anspruch 1, dadurch gekennzeichnet, daß das Klemmelement (14) und das Gegenklemmelement (10) jeweils durch einen im wesentlichen zylindrischen Körper gebildet sind.

3. Schnurklemme (3) nach Anspruch 1 und 2, dadurch gekennzeichnet, daß das Klemmelement (14) eine profilierte Fläche aufweist.

4. Schnurklemme (3) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß das Klemmelement (14) und das Gegenklemmelement (10) eine rauhe Fläche aufweisen.

5. Schnurklemme (3) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Innenseite des Gehäuses (5) eine Berührungsfläche (16) für das Zusammenwirken mit dem Klemmelement (14) aufweist.

6. Schnurklemme (3) nach Anspruch 5, dadurch gekennzeichnet, daß die Berührungsfläche (16) profiliert ist.

7. Schnurklemme (3) nach Anspruch 5, dadurch gekennzeichnet, daß die Berührungsfläche (16) rauh ist.

8. Schnurklemme (3) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß der Arretierkörper (11) mit einem Vorsprung (15) versehen ist.

9. Schnurklemme (3) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Führung (12) des Arretierkörpers (11) über einen Arm (13) mit dem Klemmelement (14) verbunden ist.

10. Schnurklemme (3) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Außenseite des Gehäuses (5) mit Rinnen (27, 28) zum Befestigen der Schnurklemme in zwei gegeneinander in Längsrichtung verschiebbaren Profil-

stangen (23, 24) versehen ist.

Revendications

1. Système de blocage de cordon (3) pour bloquer un ou plusieurs cordons (4) d'un rideau d'occultation de fenêtre (1) mobile verticalement, comprenant :

   - un corps de blocage (11) muni d'un organe de serrage (14) pour serrer ledit cordon dans une position de serrage et muni d'un guide (12) pour guider ledit cordon, ledit guide étant relié à l'organe de serrage (14) ; et
   - un boîtier (5) recevant le corps de blocage (11) et ayant un organe de contre-serrage (10) en faisant partie afin de coopérer avec l'organe de serrage (14), ledit boîtier (5) étant muni d'une entrée (18, 19), et d'une sortie (20) pour le passage des cordons, caractérisé en ce que ledit corps de blocage (11) est enfermé dans le corps de boîtier (5) et se trouve librement dans celui-ci, de sorte qu'il peut se déplacer librement le long d'une surface de contact (16) entre une position de libération dans laquelle les cordons (4) sont non bloqués et une position de blocage dans laquelle le cordon est serré entre l'organe de serrage (10) et l'organe de contre-serrage (14).

2. Système de blocage de cordon (3) selon la revendication 1, caractérisé en ce que l'organe de serrage (14) et l'organe de contre-serrage (10) sont formés chacun d'un corps sensiblement cylindrique (5).

3. Système de blocage de cordon (3) selon la revendication 1 et 2, caractérisé en ce que l'organe de serrage (14) comprend une surface profilée.

4. Système de blocage de cordon (3) selon l'une quelconque des revendications précédentes, caractérisé en ce que l'organe de serrage (14) et l'organe de contre-serrage (10) comprennent une surface rugueuse.

5. Système de blocage de cordon (3) selon l'une quelconque des revendications précédentes, caractérisé en ce que la surface intérieure du boîtier (5) comprend une surface de contact (16) afin de coopérer avec l'organe de serrage (14).

6. Système de blocage de cordon (3) selon la revendication 5, caractérisé en ce que la surface de contact (16) est profilée.

7. Système de blocage de cordon (3) selon la revendication 5, caractérisé en ce que la surface de contact (16) comprend une surface rugueuse.

8. Système de blocage de cordon (3) selon l'une quelconque des revendications précédentes, caractérisé en ce que le corps de blocage est muni d'une partie en saillie (15).

9. Système de blocage de cordon (3) selon l'une quelconque des revendications précédentes, caractérisé en ce que le guide (12) du corps de blocage (11) est relié à l'organe de serrage (14) avec interposition d'un bras (13).

10. Système de blocage de cordon selon l'une quelconque des revendications précédentes, caractérisé en ce que l'extérieur du boîtier (5) est muni de canaux (27, 28) pour fixer le système de blocage de cordon dans deux barres profilées (23, 24) coulissant l'une par rapport à l'autre dans la direction longitudinale.

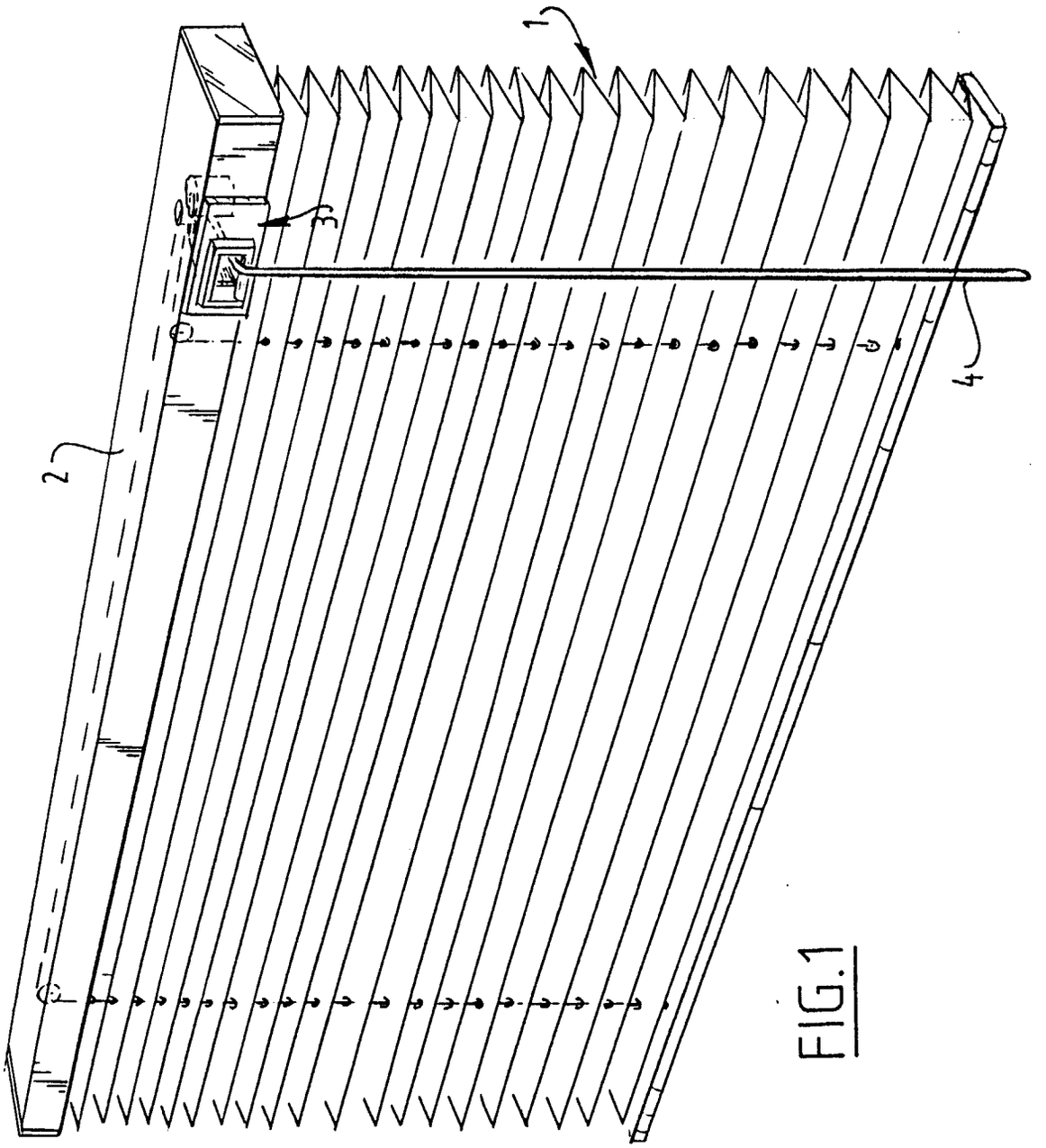
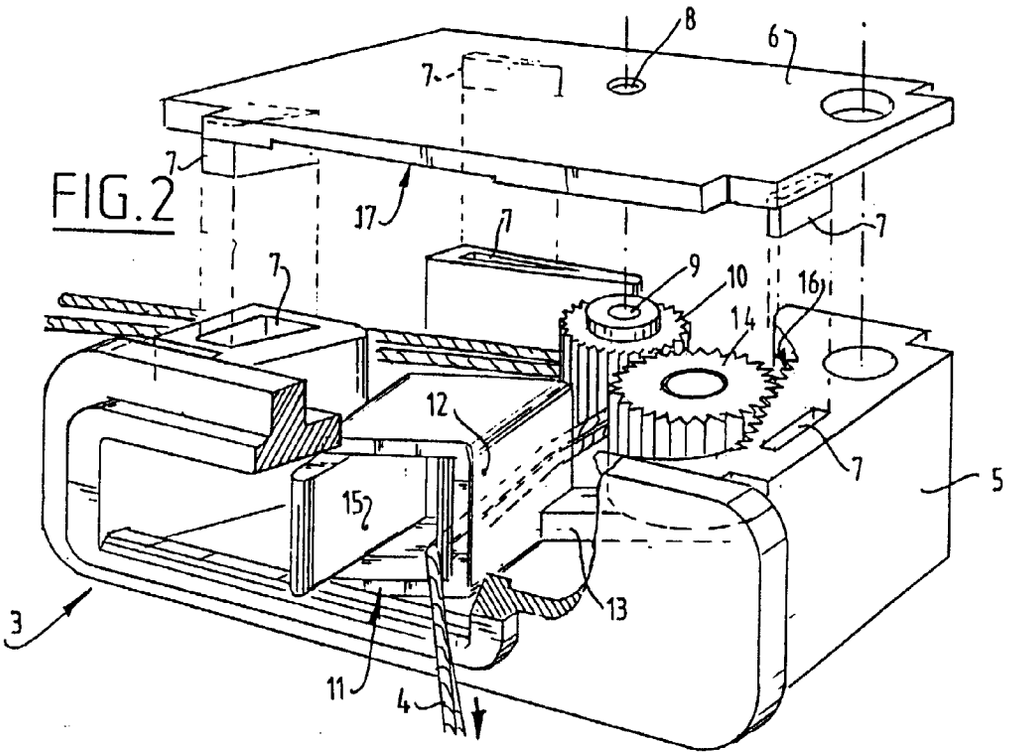


FIG.1

FIG.2



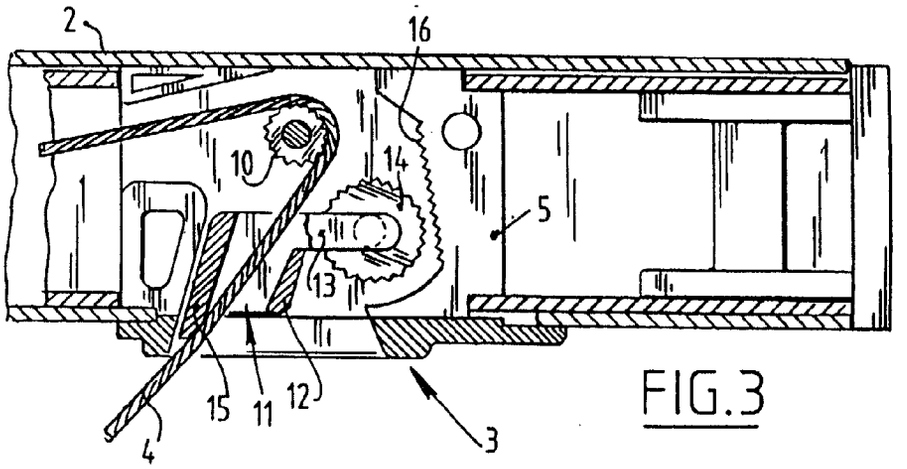


FIG.3

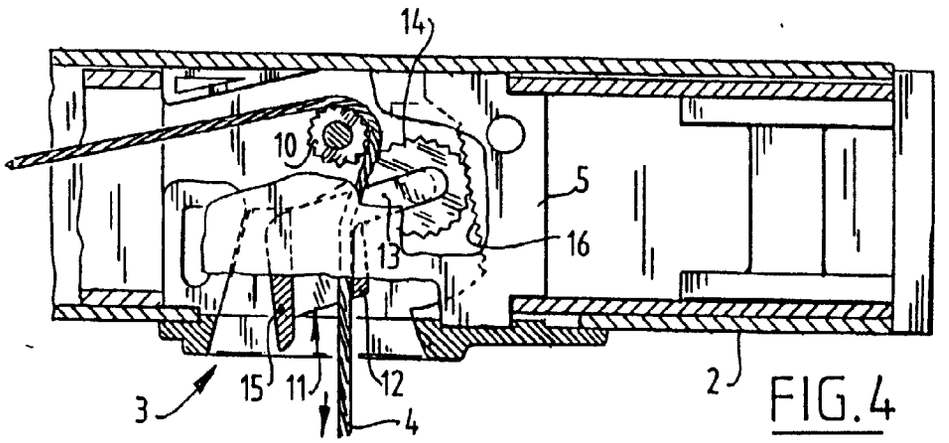
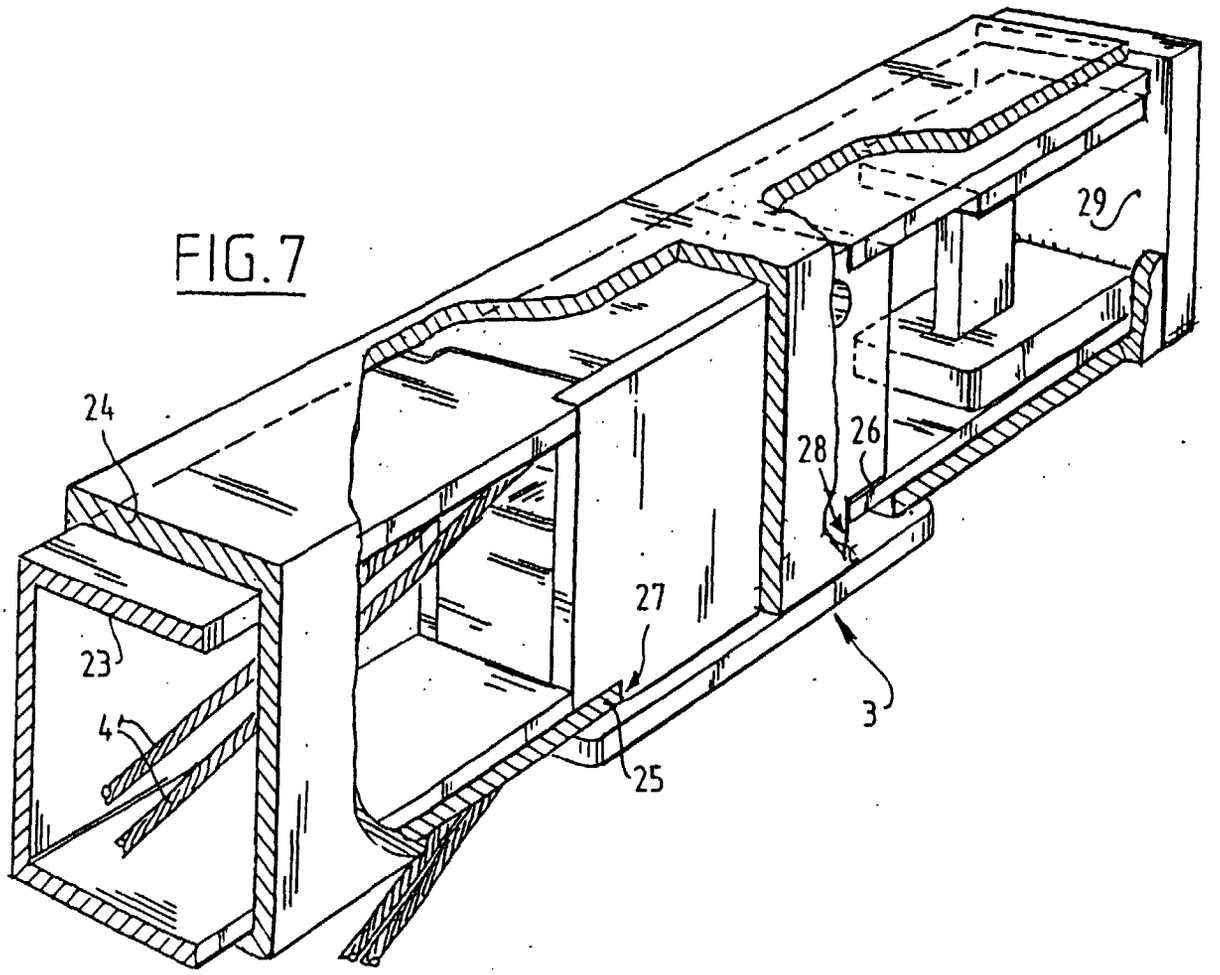


FIG.4

FIG.7



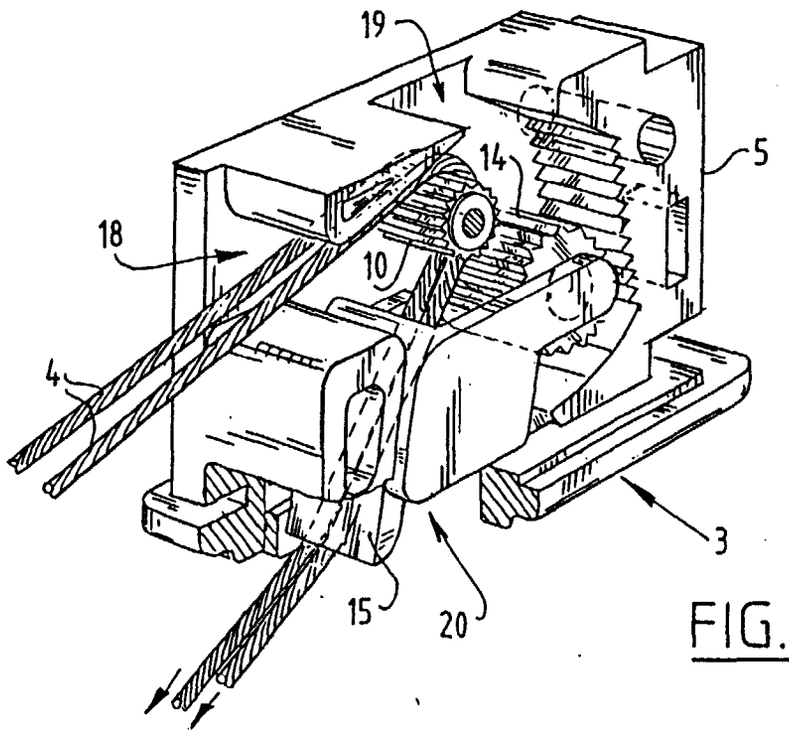


FIG.5

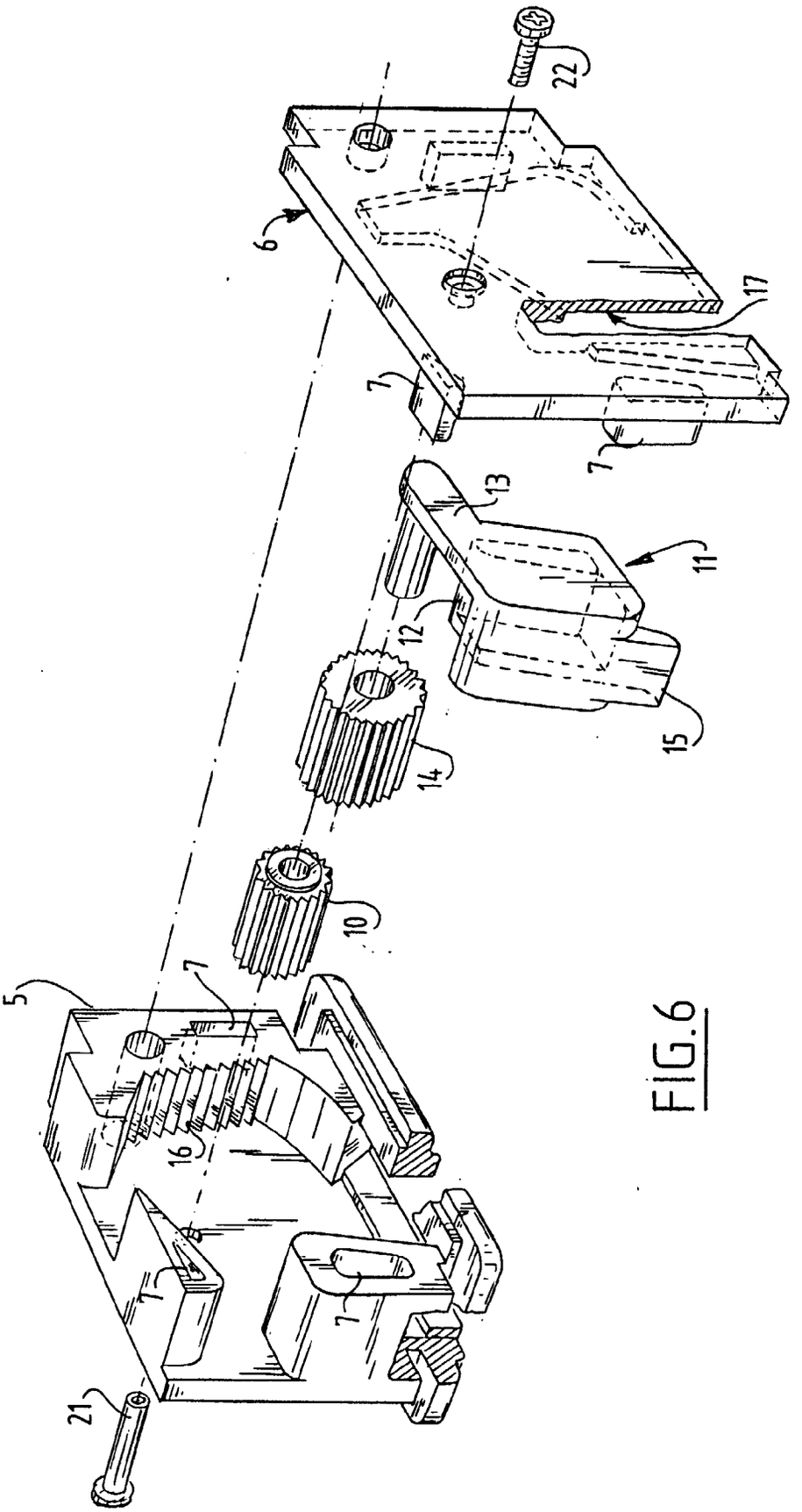


FIG.6