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(54) Blinds cord or strap collector

(57) Multipurpose construction and single positioning of the case (5) between a retractable cover (1) and a body (2), both being reinforced by discs (3), with a clear front for accessing the case (5) provided with a brake pin (5.2), the body being provided with exchangeable support legs (6) and/or caps (7) ending in a hook, as well as optimising ring (5.3) with embedded tab (5.3.1), as well as shaft (10.4) elements, braking systems with beam (8), and, if required, guide (8.1) and cord coil (9) winding systems.

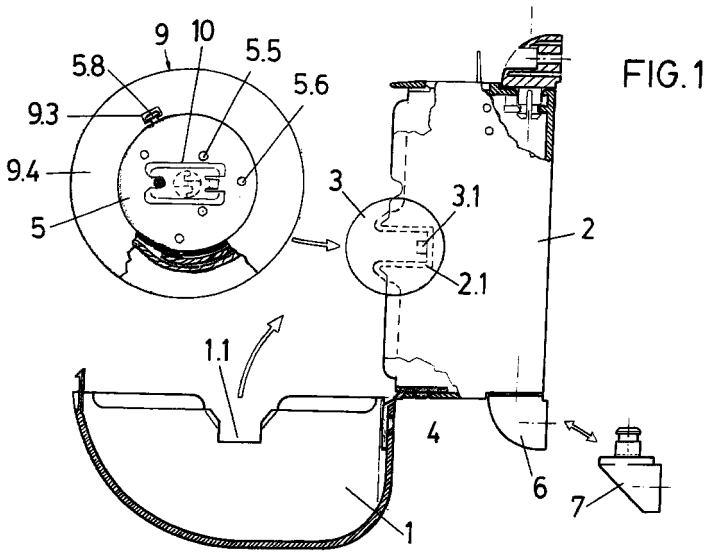

FIG. 1

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Description

OBJECT OF THE INVENTION

[0001] The invention here proposed consists of a window blinds cord or strap collector, from among manual collectors of any winding elements for blinds driven by a spring housed in a case.

[0002] This invention is characterised by a multipurpose construction of the collector based on a reinforced top, retractable and with a clear front which, in addition, aids in operating the spring without the latter losing its load and in its correct positioning, as well as being provided with exchangeable support legs.

BACKGROUND OF THE INVENTION

[0003] The function of cord or strap collectors, manually operated, for winding blinds requires no further explanation as it is known.

[0004] These manual type collectors are provided with winding means of the strap using the spring, a braking system and a casing, which can be external or embedded in a resistant element of the building or attached to the window frame.

[0005] The applicant is not aware of the existence of any multipurpose collectors for cords and straps based on the simple and quick replacement of standard elements, for which it is provided, in the case and among others, with a number of elements which are now described.

DESCRIPTION OF THE INVENTION

[0006] The invention object of the present invention relates to a window blinds cord or strap collector from among manual collectors common in the operation of any blind winding systems, conventionally driven by a spring which winds and unwinds inside a metallic case. This spring or strip has one end joined to the case and the other connected to a metallic ring placed in the shaft of the case.

[0007] This invention is characterised by multipurpose construction of the collector, in an asymmetrical internal construction of its major sides and provided with a cover rolled in at the ends of the shaft, made retractable by a lower hinge and with a clear front to allow easy access to the spring case by the assembler's hands, which are free since the cover is hinged and does not require support. This facilitates handling of the spring and insertion through the brake of both a strap and a cord, all of this with the spring loaded. Its lateral asymmetry allows correct positioning of the resort. It is also provided with exchangeable outer stands, as well as optimising means of support of the spring end and if required the guide and winding of the cord.

[0008] To this end the cover and body of the collector are provided with a lower symmetrical hinge made from highly resistant polypropylene, provided with a large central groove for articulation, holding both pieces by two lugs, introduced under pressure in opposite orifices next to the bases of their respective front ends, with perimetral U-shaped recesses which provide the necessary elasticity in the lug inserting operation.

[0009] The front access so articulated allows the assembler to introduce the loaded spring case with one hand, while with the other the brake is released and the spring freed, so that the hoisting strap of the blind is recovered.

[0010] This brake consists of a pin which is attached to the casing at any of the three orifices at 120° of an inner circumference of the casing body, so that there is a margin for error in the precision in the cut o the spring strip and allows adjusting its tension to the selected point of insertion of the pin.

[0011] A second circle of orifices also at 120° allows the insertion of a second pin easily accessible simply by retracting the collector cover.

[0012] The arrangement for introducing the loaded spring is useful for assemblies of shop-mounted windows, while for blinds mounted on-site the spring is installed loose after the window is installed.

[0013] The casing is provided with corresponding extensions of the shaft which are asymmetrical and made from either a resistant plastic or metal, so that on one end the extension takes the shape of a rectangular flange beveled at its edges, simplifying latching it onto the case placed opposite it in the collector case center.

[0014] This rectangular flange is provided with a central groove on its shorter overhanging side, for filling the pin end, and on the short end a lug is provided, also centrally, projecting from the outer face of the flange and inserted into one of the axial reinforcement disks of the collector body, which in turn extend beyond the latter and fit into opposite grooves in the cover in order to close the collector.

[0015] The other axial extension has a truncated conical shape with a dovetail profile for introducing it into the opposite central recessed profile, opposite the collector body.

[0016] Closing of the body and its cover takes place in the end diametrically opposite the hinge by the joint support of an upper tab of a lamina under the end recess of the cover, and a posterior orifice of a protrusion of the top end of the body, in such a way that this protrusion is inserted into the opposing recess and the tab follows, using the aforementioned orifice.

[0017] The spring is conventionally attached to the wall of the metal case housing it and on the other end is conventionally wound in the inner ring. This ring is provided with a double inner S-shaped tab, which supports the spring in loading, the ring in turn being supported in the recesses of the shaft line.

[0018] The ring tab is provided with an embedding for structural reinforcement and its configuration prevents the shaft from being damaged when it is made

from plastic, as occurs with conventional hooks for common rings.

[0019] The shaft is of a conventional resistant construction material, and is provided with a double rectangular recess along its line which are placed diametrically opposite each other.

[0020] Finally, regarding the case, the outer embedding of the central orifice of its body for the shaft to pass prevents the spring supporting ring from hooking onto its lip edge.

[0021] In the embodiment of the cord collector, the case cover is replaced by a coil, preferably made of plastic, with sufficiently large flaps to house the cord which coils wound it. The core of the coil has a perpendicular spring on a plate placed across the flaps and well lower than these, with orifices next to its free end.

[0022] The end of the cord may be tied to this end of the plate. In addition, the core is provided with a recess next to the perpendicular plate which is flexible enough to be housed in the opposite recess while the cord is wound, next to a small initial segment of it.

[0023] Guided by the head of the screw, the case is placed projecting out the side, in a suitable recess of one of the flaps, also leaving outside the outer face of its body and the rectangular axial flange, and after it is introduced in the coil, the loaded spring is released recovering the cord in the same way as for the strap.

[0024] Finally, both for the strap and the cord collector, the conventional individual beams, both for strap and cord, are eliminated, being replaced for a single one for both uses. A multipurpose brake is provided driven by a lever and which incorporates a special recess useful for the cord since the strap does not require one.

[0025] The collector built in this way, mounted for either application, may be provided with exchangeable leg supports of plastic or metal; an inner finish of the leg as an inner hook is repeated for the cap of the metallic leg.

DESCRIPTION OF THE DRAWINGS

[0026] As a complement to the description being made and in order to aid a better understanding of the characteristics of the invention, attached to the present descriptive memory is a set of drawings where for purposes of illustration and in a non-limiting way the following is shown:

Figure 1 shows an exploded view of the collector, in its version for a blinds winding cord, showing the hinged cover, the way in which the spring case is inserted with some of its improvements and the possible alternative support legs for the former.

Figure 2 shows another collector body with the case uncovered, in an exploded view of both.

Figure 3 is an enlargement of the cord coil at the cord-support protrusion and an enlargement of the jointing hinge of the collector.

Figure 4 is an exploded view of the different elements of the spring case, including the external tensioning pin.

PREFERRED EMBODIMENT OF THE INVENTION

[0027] In light of the above, the present invention relates to a blinds cord or strap collector, from among manual collectors driven by a winding spring in a case, characterised in allowing introduction by the assembler of the case during assembly, in any form of assembly, whether on site after installing the windows or during preassembly of the set in the shop. This assembly is performed with a single hand, and through a clear front access, which in the second case is performed with the spring already loaded, while the other hand is used to then release the pin from the brake and to free the spring, so that the coiled strap of the blind is recovered. All of this is based on a multipurpose construction of the collector, with an asymmetrical construction of its main inner sides, for a single positioning of the case (5), which is placed between a cover (1) and a body (2) reinforced in both parts by axial discs (3) on their ends. Cover (1) is retracted by a lower hinge (4) and has a clear front to access the case (5) of spring (5.1), allowing to free the assembler's hands by use of the hinge, thus enabling a better handling of the spring (5.1) and the insertion of braking pin (5.2) which is previously loaded. The body is provided with exchangeable support legs (6) and/or caps (7) of any material, with an internal end finishing in a hook, as well as optimising ring (5..3) with tab (5.3.1) embedded and constructed to not damage the shaft (10.4), preferably made of plastic, which supports the end of spring (5.1) thus also optimising the shaft (10.4) and the braking means with a beam (8) and eventually also optimising the guide (8.1) and cord coil winding (9).

[0028] To this end cover (1) and body (2) are provided with a hinge (4) having a groove (4.1) for articulation, and respective pressure lugs (4.2)which are both attached to both, and provided with U-shaped perimetral recesses (4.3), while the collector is closed by the introduction of tab (1.29 of lamina (1.3) of the cover (1) in the orifice (2.3) of body (2) and of protrusion (2.4) in recess (1.4) of cover (1).

[0029] Brake pin (5.2) is supported in the casing, projecting beyond all three orifices (5.5) of the case body (5) arranged in a circumference and equidistant from each other at 120°, while other more outer orifices (5.6), also arranged at 120°, allow inserting a second pin after the simple retraction of the collector cover (1).

[0030] A rectangular beveled (10.1) flange (10) is hooked onto the recess (2.1) opposite body (2) and a groove (10.2) is provided for fitting the end of the pin

(5.2) as well as a lug (10.3) which is inserted in the recess (3.1) of one of the reinforcement discs (3), which in turn are embedded in grooves (1.1) opposite cover (1). On the opposite end, a truncated cone-shaped flange (10.5) is inserted in the recess (2.2) opposite the collector body (2).

[0031] The spring is wound and loaded on internal ring (11) which has a tab (11.1) which is supported on protrusion (10.5) of double recess (10.6) along the lines of shaft (10.4) while the outer embedding (5.6) of the central orifice (5.7) of the case body (5), for the pin passage, prevents ring (5.3) from catching.

[0032] In the execution which is provided with a cord, the case (5) cover is replaced by coil (9) which is provided with an elastic plate (9.1) with orifices, meant to support the cord (12), and also provided with a recess (9.2) for housing both the plate (9.1) and a small segment of the cord (12) when coiled, the case entering guided by the head of a screw (5.8) into the flap (9.4), so that after the case (5) is introduced in coil (9), loaded spring (5.1) relaxes, recovering cord (12), in the same way as for the strap.

[0033] This description is not extended in the understanding that any expert in the field would have sufficient information to understand the scope of the invention and the advantages derived thereof, as well as to reproduce it.

[0034] It is also understood that as long as they do not alter the essence of the invention, variations in materials, shape, size and arrangement of the elements are subject to variation within the same characterisation.

[0035] The terms used in the description and its meaning must always be taken in a non-limiting sense.

Claims

1. Blinds strap or cord collector, driven by a winding spring in a case, allowing the assembler to introduce the case:

- with one hand and through a clear front access, in any mounting arrangement, both on site after the windows are installed or in preassembly of the set in the shop, with the spring previously loaded.
- while with the other hand, the brake pin is released ad the spring freed, so that the blinds hoisting strap is recovered, characterised in that:
- it has an asymmetric construction of its major sides for a single positioning of the case (5),
- case (5) is placed between a cover (1) and a body (2) which are reinforced by axially placed end discs (3)
- cover (1) is retractable due to a lower hinge (4) and has a clear front, for accessing the case (5) of spring (5.1), this articulation freeing the assembler's hands and facilitating handling of spring (5.1) and entering of brake pin (5.2) which is loaded previously.
- body (2) is provided with support legs (6) and/or caps (7) which are exchangeable and made of any material, ending in an internal hook,
- ring (5.3) is optimised by tab (5.3.1) being embedded and in a construction that does not harm the shaft (10.4), preferably made of plastic and which supports the end of the spring (5.1).
- elements joined to the shaft (10.4) and braking means are optimised by a beam (8), as well as guide means (8.1) and cord coil (9) winding means, if required.

2. Blinds strap or cord collector, as in previous claim, characterised in that the cover (1) and the body(2) are provided with a hinge (4) with an articulation groove (4.1) and respective pressure lugs (4.2) which are attached to both, and are provided with U-shaped recesses (4.3) around the perimeter, while the collector is closed by the introduction of tab (1.2) of lamina (1.3) of the cover (1) in the orifice (2.3) of body (2) and of protrusion (2.4) in recess (1.4) of cover (1).

3. Blinds strap or cord collector, as in claim 1, characterised in that brake pin (5.2) is supported by the case, extending beyond all three orifices (5.5) of the case (5) body, which are arranged in a circumference equidistant at 120°, while other more external orifices (5.6) also placed at 120°, allow to introduce a second pin, after simply retracting cover (1) of the collector.

4. Blinds strap or cord collector, as in above claims, characterised in that the rectangular beveled (10.1) flange (10) hooks onto the case (2.1) opposite body (2) and is provided with a groove (10.2) for fining the end of pin (5.2), as well as a lug (10.3) which is inserted into recess (3.1) of one of reinforcement discs (3), which in turn are embedded in the grooves (1.1) opposite the cover (1). Meanwhile, in the other end a truncated cone shaped flange (10.5) is inserted in to the recess (2.2) of the opposite side of the collector body (2).

5. Blinds strap or cord collector, as in previous claims, characterised in that the spring winds and is loaded on the inner ring (11) which is provided with a tab (11.1) which is supported by a protrusion (10.5) of the double recess (10.6) of the lines of shaft (10.4), while the outer embedding (5.6) of the central orifice (5.7) of the case (5) body, for the pin passage, prevents the ring (5.3) from catching.

6. Blinds strap or cord collector, as in previous claims, characterised in that in the cord construction the case (5) cover is replaced by a coil (9), provided with an elastic plate (9.1) with orifices which supports the cord (12), and also is provided with a recess (9.2) for housing both the plate and a small segment of coiled cord (12), the case entering the recess (9.3) of the flap (9.4) while guided by the head of screw (5.8), so that, after case (5) is introduced in the coil (9), loaded spring (5.1) relaxes, recovering cord (12), in the same way as for the strap.

FIG.1

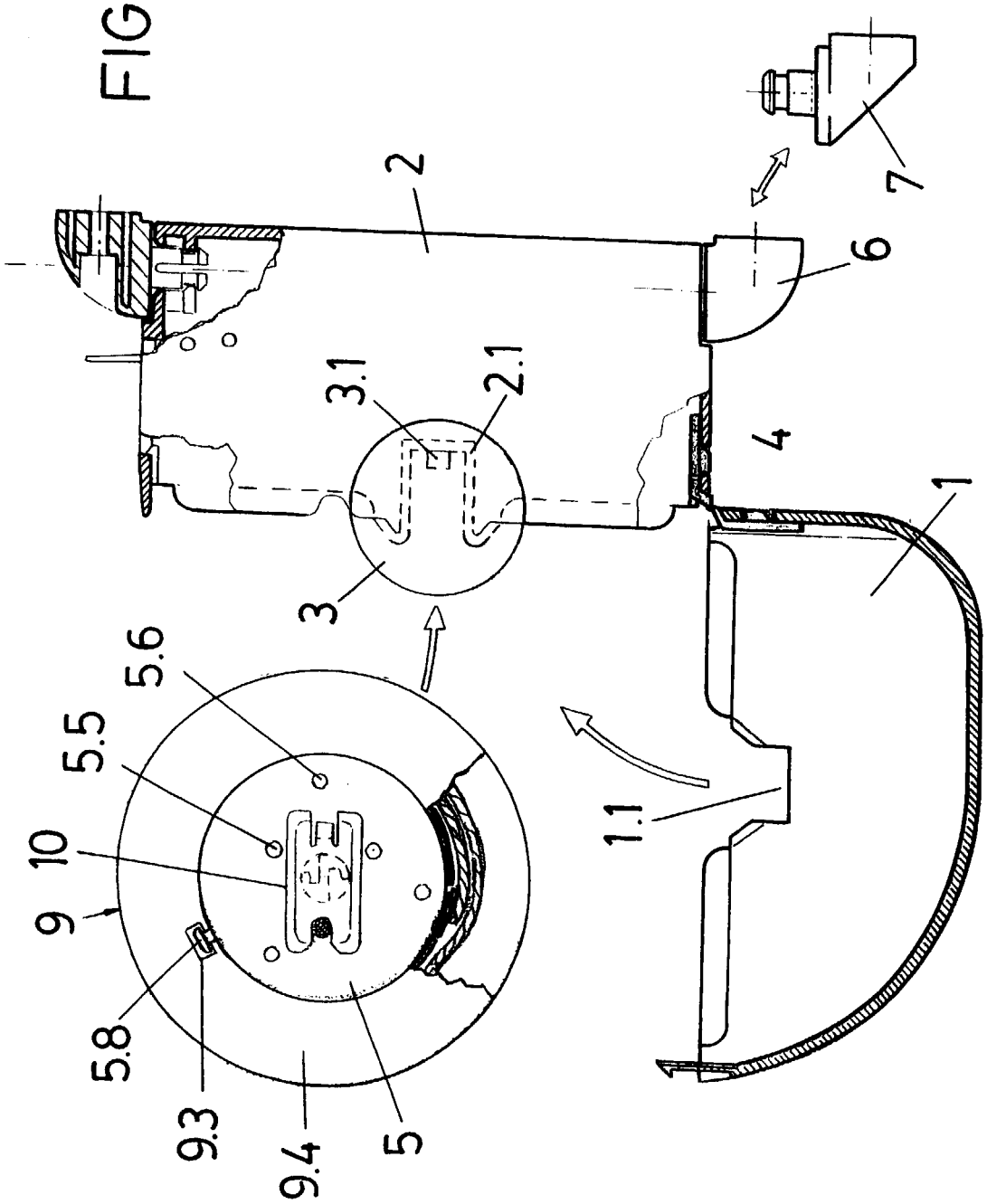
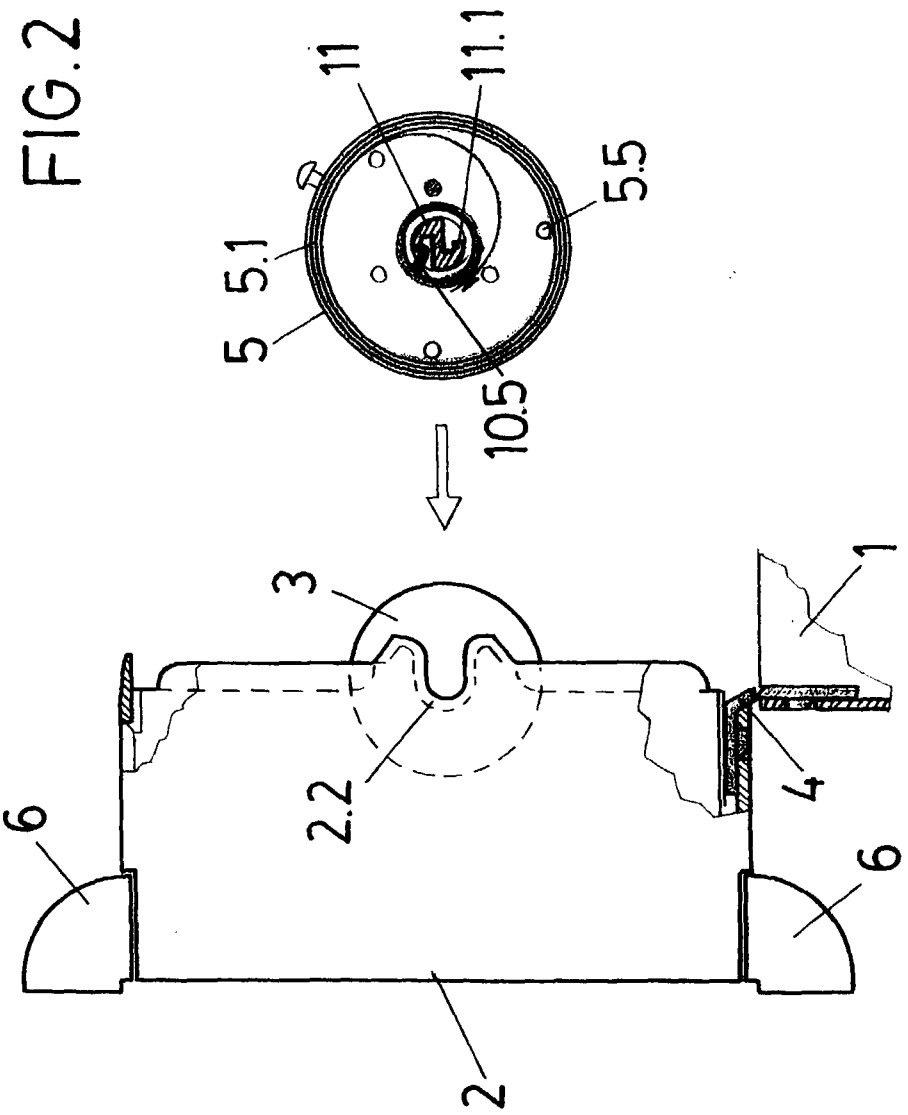


FIG.2



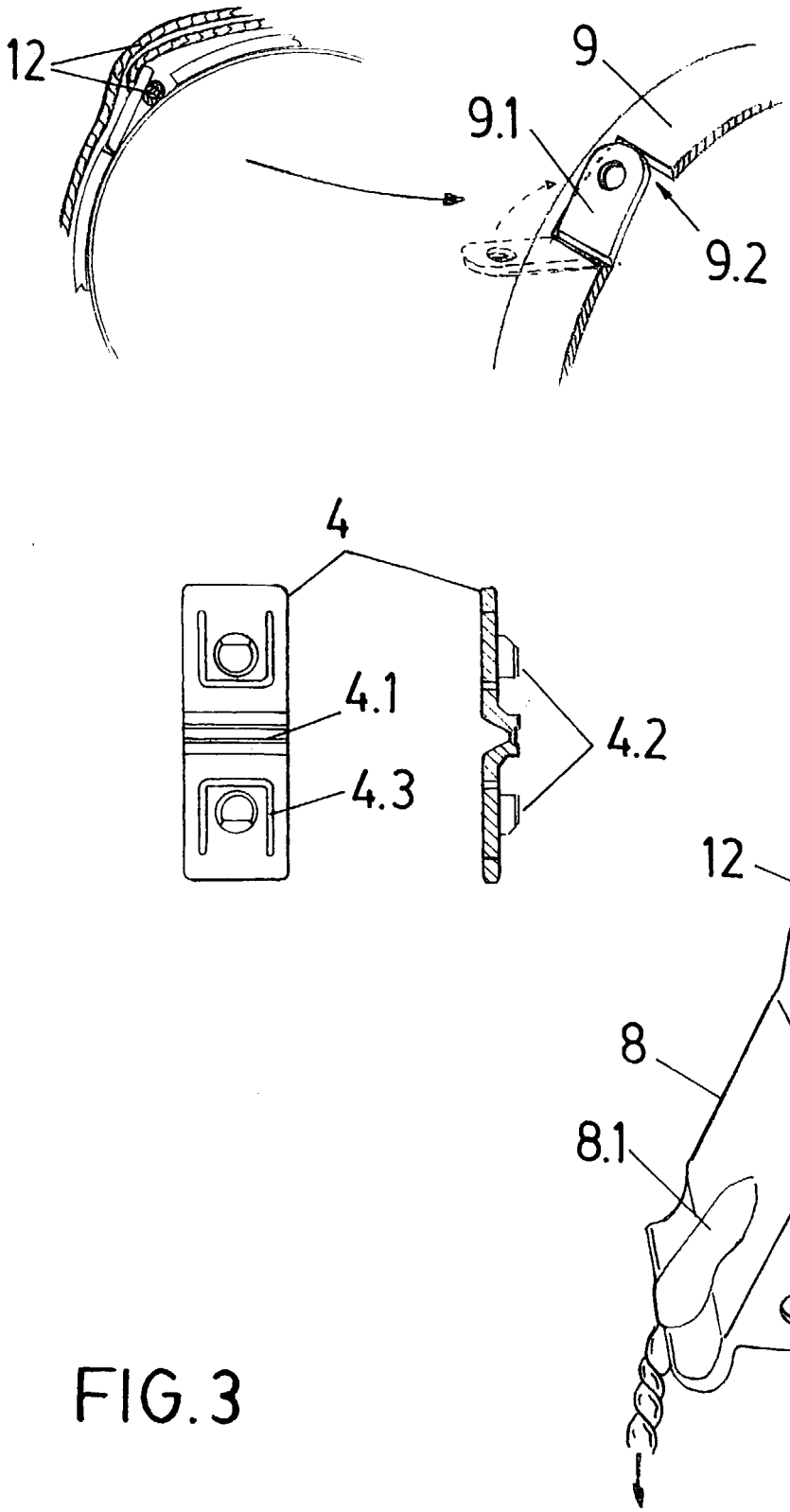


FIG.3

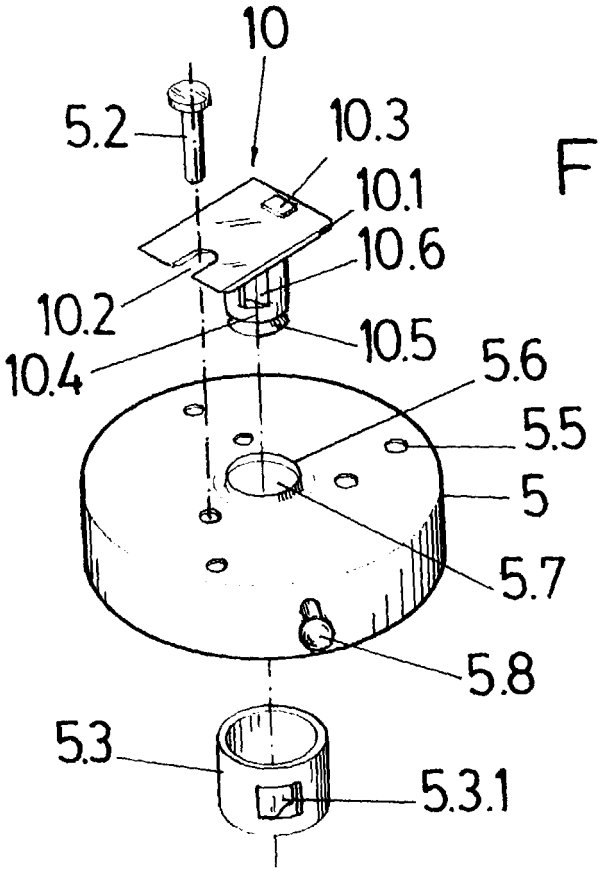


FIG. 4