(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 001 131 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
17.11.2004 Bulletin 2004/47

(51) Int Cl.[7]: **E06B 9/78**

(21) Application number: **99500074.2**

(22) Date of filing: **11.05.1999**

(54) **Blinds cord or strap collector**

Gurt- oder Riemenwickler einer Jalousie

Enrouleur de ruban ou cordon pour stores

(84) Designated Contracting States:
AT BE CH DE DK FI FR GB GR IE IT LI LU MC NL PT SE
Designated Extension States:
SI

(30) Priority: **13.11.1998 ES 9802375**

(43) Date of publication of application:
17.05.2000 Bulletin 2000/20

(73) Proprietor: **GAVIOTA SIMBAC, S.L.**
03630 Sax (Alicante) (ES)

(72) Inventor: **Victor Guillen, Chico**
03630 Sax (Alicante) (ES)

(74) Representative:
Esteban Perez-Serrano, Maria Isabel
UDAPI & Asociados
Patentes y Marcas
Explanada, 8
28040 Madrid (ES)

(56) References cited:
EP-A- 0 812 795
CH-A- 438 613

EP 1 001 131 B1

Printed by Jouve, 75001 PARIS (FR)

Description

OBJECT OF THE INVENTION

[0001] The invention here proposed consists of a window blinds cord or strap collector driven by a spring housed in a case.

BACKGROUND OF THE INVENTION

[0002] 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.

[0003] A collector according to the preamble of claim 1 is known from CH-A-438613, where the cover is not connected to the body with any means, so assembler's hand is not free, not being possible to handle at the same time the spring and the braking pin as the assembler's hand is required for holding the cover.

DESCRIPTION OF THE INVENTION

[0004] The present invention relates to a window blinds cord or strap collector, 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 shaft.

[0005] This invention is characterised by multipurpose construction of the collector, in an asymmetrical internal construction of its major sides and provided with a cover, 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 spring case. It is also provided with exchangeable outer stands, as well as means of support of the spring end.

[0006] 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.

[0007] 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.

[0008] 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.

[0009] A second circle of orifices also at 120° allows the insertion of a second pin easily accessible simply by retracting the collector cover.

[0010] 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.

[0011] 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.

[0012] This rectangular flange is provided with a central groove on its shorter overhanging side, for fitting 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.

[0013] 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.

[0014] 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.

[0015] 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.

[0016] 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.

[0017] 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.

[0018] 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.

[0019] 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 around 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.

[0020] 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.

[0021] 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.

[0022] 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.

[0023] 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

[0024] 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 the following is shown:

Figure 1 shows an exploded view of the collector, showing the hinged cover, the way in which the spring case is inserted and the support legs.

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

Figure 3 is an enlargement of the cord coil at the cord-support protrusion and an enlargement of the 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

[0025] In light of the above, the present invention relates to a blinds cord or strap collector, driven by a winding spring in a case, allowing introduction of the case by the assembler during assembly, 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).

[0026] 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 (1.2) of lamina (1.3) of the cover (1) in the orifice of body (2) and of protrusion (2.4) in recess (1.4) of cover (1).

[0027] 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).

[0028] 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).

[0029] 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 of the central orifice (5.7) of the case body (5), for the pin passage, prevents ring (5.3) from catching.

[0030] 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.

Claims

1. Blinds strap or cord collector, comprising a cover (1), a body (2), a case (5), a winding spring (5.1) inside the case (5), one end of the winding spring (5) joined to the case (5) and the other end of the winding spring (5) connected to a shaft (10.4), **characterised in that**,

   - the shaft (10.4) has on one end an extension shaped as a rectangular bevelled flange (10) and on the other end an extension shaped as a truncated cone-shaped flange (10.5) with a dovetail profile;
   - said body (2) has an asymmetric construction of its major sides for a single positioning of the case (5) by presenting on one side a recess (2.1) for receiving the rectangular bevelled flange (10) of the shaft (10.4) and on the opposite side a recess (2.2) for receiving the truncated cone-shaped flange (10.5);
   - the major sides of the body (2) are reinforced by discs (3);
   - said cover (1) is hinged on a lower part of said body (2),
     so that it can pivot into a low position, thereby providing a clear front access opening of the body (2) for inserting the case (5) of the spring (5.1);
   - said body (2) is also provided with support legs (6) and/or caps (7) which are exchangeable and have an internal end finishing in a hook;
   - said case (5) has an axially placed ring (5.3), which is provided with a tab (5.3.1) which supports one end of the spring (5.1);
   - said tab (5.3.1) is embedded and in a construction that does not damage the shaft (10.4) which passes through the ring (5.3);
   - said body (2) also comprises braking means comprising a beam (8), guide means (8.1) and cord coil (9) winding means.

2. Blinds strap or cord collector, according to claim 1, **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 of body (2) and of protrusion (2.4) in recess (1.4) of cover (1).

3. Blinds strap or cord collector, according to 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, according to claims 2 and 3, **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 fitting 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), and in the other end a truncated cone shaped flange (10.5) is inserted into the recess (2.2) of the opposite side of the collector body (2).

5. Blinds strap or cord collector, according to claim 4, **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 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, according to claim 5, **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.

Patentansprüche

1. Jalousiegurt- oder Kordelaufwickelvorrichtung, die eine Abdeckung (1), einen Körper (2), ein Gehäuse (5) und eine Windungsfeder (5.1) innerhalb des Gehäuses (5) umfassen, wobei das eine Ende der Windungsfeder (5) mit dem Gehäuse (5) verbunden ist und das andere Ende der Windungsfeder (5) mit einer Welle (10.4) verbunden ist, **dadurch gekennzeichnet, dass**

   - die Welle (10.4) an dem einen Ende über eine Verlängerung verfügt, die die Form eines rechteckigen abgeschrägten Flansches (10) annimmt und an dem anderen Ende über eine Verlängerung in Form eines abgeschnittenen kegelförmigen Flansches (10.5) mit einem Schwalbenschwanzprofil;
   - der besagte Körper (2) einen asymmetrischen

Aufbau der längeren Seiten für eine enzige Positionierung des Gehäuses (5) hat, indem eine Seite eine Aussparung (2.1) aufweist, um den rechteckige abgeschrägten Flansch (10) der Welle (10.4) aufzunehmen und an der anderen Seite eine Aussparung (2.2), um den abgeschnittenen kegelförmigen Flansch (10.5) aufzunehmen;

- die längeren Seiten des Körpers (2) sind durch Scheiben (3) verstärkt;
- die besagte Abdeckung (1) gelenkig an der unteren Seite des besagte Körpers (2) angebracht ist, so dass sie in eine niedrigere Position schwenken kann und somit einen guten Vorderzugang auf den Körper (2) geben, um das Gehäuse (5) der Feder (5.1) einzuführen;
- besagter Körper (2) auch über Auflagerbeine (6) und/oder Kappen (7) verfügt, die austauschbar sind und über ein inneres Ende vefügen, das mit einem Haken endet;
- besagtes Gehäuse (5) einen axial angebrachten Ring (5.3) hat, der über eine Klappe (5.3.1) verfügt, auf der das eine Ende der Feder (5.1) auflagert:

- besagte Klappe (5.3.1) in eine Konstruktion eingebettet ist, die nicht die Welle (10.4) beschädigt, die durch den Ring (5.3) verläuft;
- besagter Körper (2) auch eine Bremsvorrichtung umfasst, die einen Balken (8) umfasst, Führungsvorrichtungen (8.1) und eine Kordelspule (9).

2. Jalousiegurt- oder Kordelaufwickelvorrichtung gemäss Anspruch 1, **dadurch gekennzeichnet, dass** die Abdeckung (1) und der Körper (2) über ein Gelenk (4) verfügen mit einer Gelenkvertiefung (4.1) und jeweiligen Druckklappen (4.2), die an beide angebracht sind und über U-förmige Aussparungen (4.3) über den Umfang verfügen, während die Aufwickelvorrichtung durch das Einführen eines Dekkels (1.2) aus Schichten (1.3) der Abdeckung (1) in die Öffnungen des Körpers (2) und von einem Vorsprung (2.4) in die Aussparung (1.4) der Abdeckung (1) verschlossen wird.

3. Jalousiegurt- oder Kordelaufwickelvorrichtung gemäss Anspruch 1, **dadurch gekennzeichnet, dass** der Bremsstift (5.2) auf dem Gehäuse auflagert und über alle drei Öffnungen (5.5) des Gehäuses (5) hinausragt, die auf dem Umfang in gleichem Abstand bei 120° angebracht werden, während andere mehr äusserlich angebrachte Öffnungen (5.6) die Einführung eines zweiten Stifts erlauben, n achdem d ie A bdeckung (1) d er A ufwickelvorrichtung e infach zurückgezogen wird.

4. Jalousiegurt- oder Kordelaufwickelvorrichtung gemäss Anspruch 2 oder 3, **dadurch gekennzeichnet, dass** der rechteckige abgeschrägte (10.1) Flansch (10) an dem Gehäuse (2.1) gegenüber des Körpers (2) angebracht wird und über eine Vertiefung (10.2) verfügt, um das Ende des Stifts (5.2) anzubringen, sowie eine Klappe (10.3), die in die Aussparung (3.1) einer der Verstärkungsscheiben (3) eingeführt wird, die ihrerseits in die Vertiefungen (1.1) gegenüber der Abdeckung (1) eingebettet werden und an dem anderen Ende wird ein abgeschnittener kegelförmiger Flansch (10.5) in die Aussparung (2.2) des anderen Endes des Aufwickelvorrichtungskörpers (2) eingeführt.

5. Jalousiegurt- oder Kordelaufwickelvorrichtung gemäss Anspruch 4, **dadurch gekennzeichnet, dass** die Feder auf dem inneren Ring (11) aufgewickelt und gespannt wird, der über einen Deckel (11.1) verfügt, der auf einem Vorsprung (10.5) der doppelten Aussparung (10.6) der Linien oder Achse (10.4) auflagert, während die äussere Einbettung der mittigen Öffnung (5.7) des Gehäuses (5) für die Stiftaufnahme den Ring (5.3) davon abhält zu greifen.

6. Jalousiegurt- oder Kordelaufwickelvorrichtung gemäss Anspruch 5, **dadurch gekennzeichnet, dass** bei der Kordelkonstruktion die Gehäuseabdeckung (5) durch eine Spule (9) ersetzt wird, die über eine elastische Lamelle (9.1) verfügt mit Öffnungen, die die Kordel (12) halten und verfügt ausserdem über eine Aussparung (9.2), um die Lamelle sowie einen kleinen Abschnitt der aufgewickelten Kordel (12) aufzunehmen, wobei das Gehäuse in die Aussparung (9.3) der Klappe (9.4) gelangt, während es von dem Kopf der Förderschnecke (5.8) geführt wird, so dass, nachdem das Gehäuse (5) in die Spule (9) eingeführt wurde und die Feder (5.1) gespannt ist, sich diese entspannt und damit die Kordel (12) zurückholt genau wie den Gurt.

Revendications

1. Collecteur de bande ou corde de volets, comprenant un couvercle (1) un corps (2), un boîtier (5), un ressort de bobinage (5,1) à l'intérieur du boîtier (5), une extrémité du ressort de bobinage (5) étant unie au boîtier (5) et l'autre extrémité du ressort de bobinage (5) étant reliée à un arbre (10,4) **caractérisé en ce que**,

- l'arbre (10,4) a sur une extrémité une saillie conformée sous forme d'un rebord biseauté rectangulaire (10) et sur l'autre extrémité une saillie conformée sous forme d'un rebord tronconique (10,5) avec un profil en queue d'aronde.
- ledit corps (2) a une construction asymétrique

de ses grands côtés pour un positionnement unique du boîtier (5) en présentant sur un côté un évidement (2,1) pour recevoir le rebord biseauté rectangulaire (10) de l'arbre (10,4) et sur le côté opposé un évidement (2,2) pour recevoir le rebord tronconique (10,5);

- les grands côtés du corps (2) sont renforcés par des disques (3); ledit couvercle (1) est articulé sur une partie inférieure dudit corps (2), de manière qu'il peut pivoter dans une position basse, en fournissant ainsi une ouverture d'accès frontale libérée du corps (2) pour insérer le boîtier (5) du ressort (5,1);
- ledit corps (2) est aussi pourvu de patte de supports (6) et/ou des capots (7) qui sont échangeables et qui ont une extrémité interne terminant en un crochet;
- ledit couvercle (5) a u ne b ague (5,3) d isposée a xialement, q ui e st p ourvue d'une languette (5,3,1) qui supporte une extrémité du ressort (5,1);
- ladite languette (5,3,1) est encastrée et se trouve dans une construction qui ne peut pas endommager l'arbre (10,4) qui traverse la bague (5,3);
- ledit corps (2) comprend aussi des moyens de freinage qui comprennent une âme (8), u n moyen de guidage (8,1) et d es moyens de bobinage d'une une bobine de corde (9)

2. Collecteur de bande ou corde de volets, selon la revendication 1, **caractérisé en ce que** le couvercle (1) et le corps (2) sont pourvu d'une charnière (4) avec une rainure d'articulation (4,1) et des crampons de pressions (4,2) qui sont fixés aux deux, et ils sont pourvus d'évidements sous forme de "U" (4,3) autour du périmètre, tandis que le collecteur est fermé par l'introduction de la languette (1,2) de lame (1,3) du couvercle (1) dans l'orifice du corps (2) et en vol-à faux (2,4) dans l'évidement (1,4) du couvercle (1).

3. Collecteur de bande ou corde de volets, selon la revendication 1, **caractérisé en ce que** la broche de freinage (5,2) est supportée par le boîtier, qui s'étend au-delà de trois orifices (5,5) du corps de boîtier (5), qui sont disposée dans une circonférence équidistante à 120°, tandis que d'autres orifices externes (5,6) aussi disposés à 120°, permettent l'introduction d'une seconde broche, après le simple retrait du couvercle (1) du collecteur.

4. Collecteur de bande ou corde de volets, selon les revendications 2 et 3, **caractérisé en ce que** le rebord (10) biseauté rectangulaire (10,1) accroché sur le boîtier (2,1) opposé du corps (2) et il est pourvu d'une rainure (10,2) pour aménager l'extrémité de la broche (5,2) ainsi qu'un crampon (10,3) qui est inséré dans l'évidemment (3,1) d'un des disques de renforcement (3), qui à son tour sont encastrés dans les rainures (1,1) opposées au couvercle (1), et à l'autre extrémité un rebord tronconique (10,5) est inséré dans l'évidemment (2,2) du côté opposé du corps de collecteur (2).

5. Collecteur de bande ou corde de volets, selon la revendication 4, **caractérisé en ce que** le ressort se bobine et il est chargé sur la bague interne (11) qui est pourvue d'une languette (11,1) qui est supportée par une saillie (10,5) de double évidemment (10,6) des lignes d'arbre (1',4), tandis que l'encastrement extérieur de l'orifice central (5,7) du corps de boîtier (5), pour le passage de broche, prévient la capture de la bague (5,3).

6. Collecteur de bande ou corde de volet, selon la revendication 5, **caractérisé en ce que** dans la construction de corde, le couvercle du boîtier (5) est remplacé par une bobine (9), pourvue d'une plaque élastique (9,1) avec des orifices qui supporte la corde (12), et elle est aussi pourvue d'un évidemment (9,2) pour loger aussi bien la plaque qu'un petit segment de corde bobinée (12), le boîtier entrant dans l'évidemment (9,3) de la languette (9,4) en même temps qu'il est guidé par la tête d'une vis (5,8), de manière qu'après l'introduction du boîtier (5) dans la bobine (9), le ressort chargé (5,1) se relâche, en récupérant la corde (12), de la même manière que pour la bande.

FIG. 1

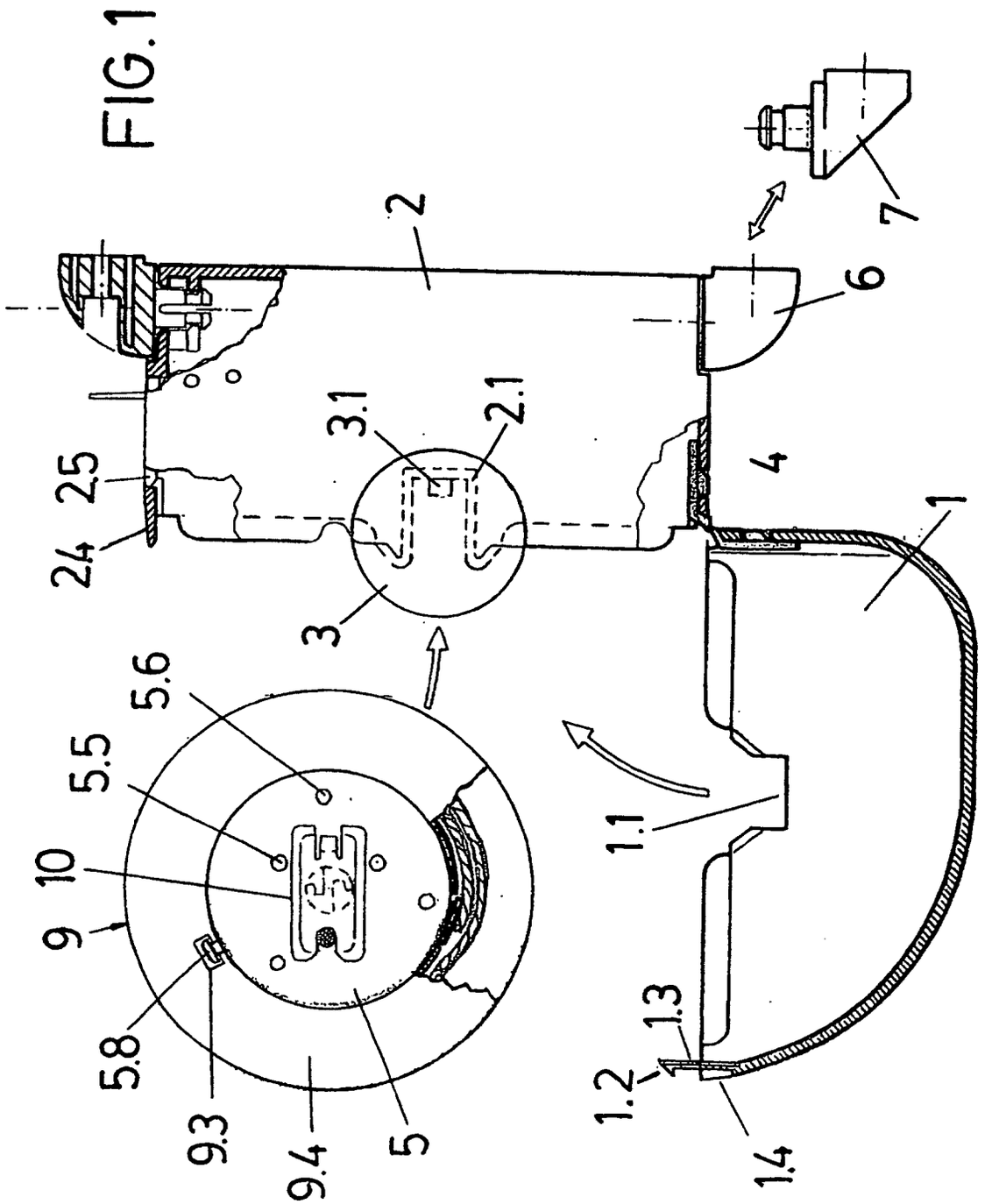
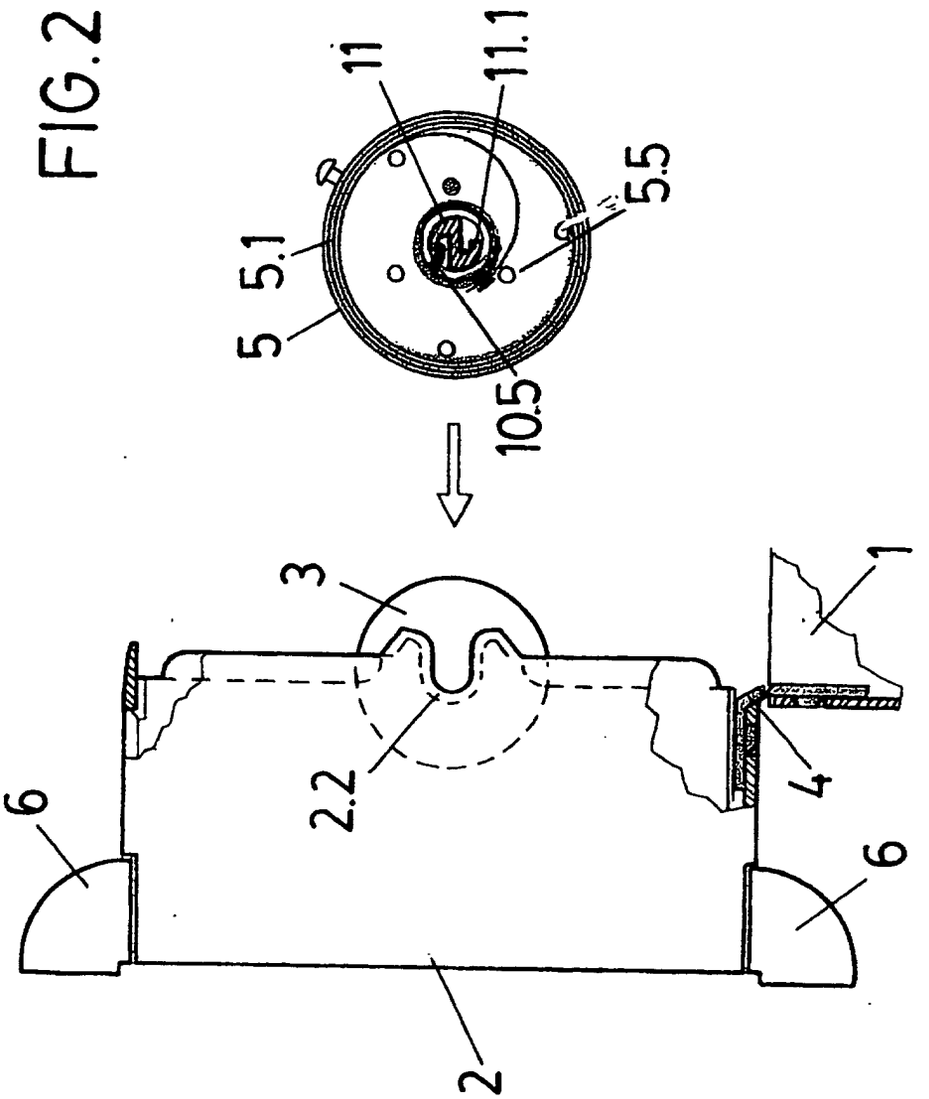


FIG.2



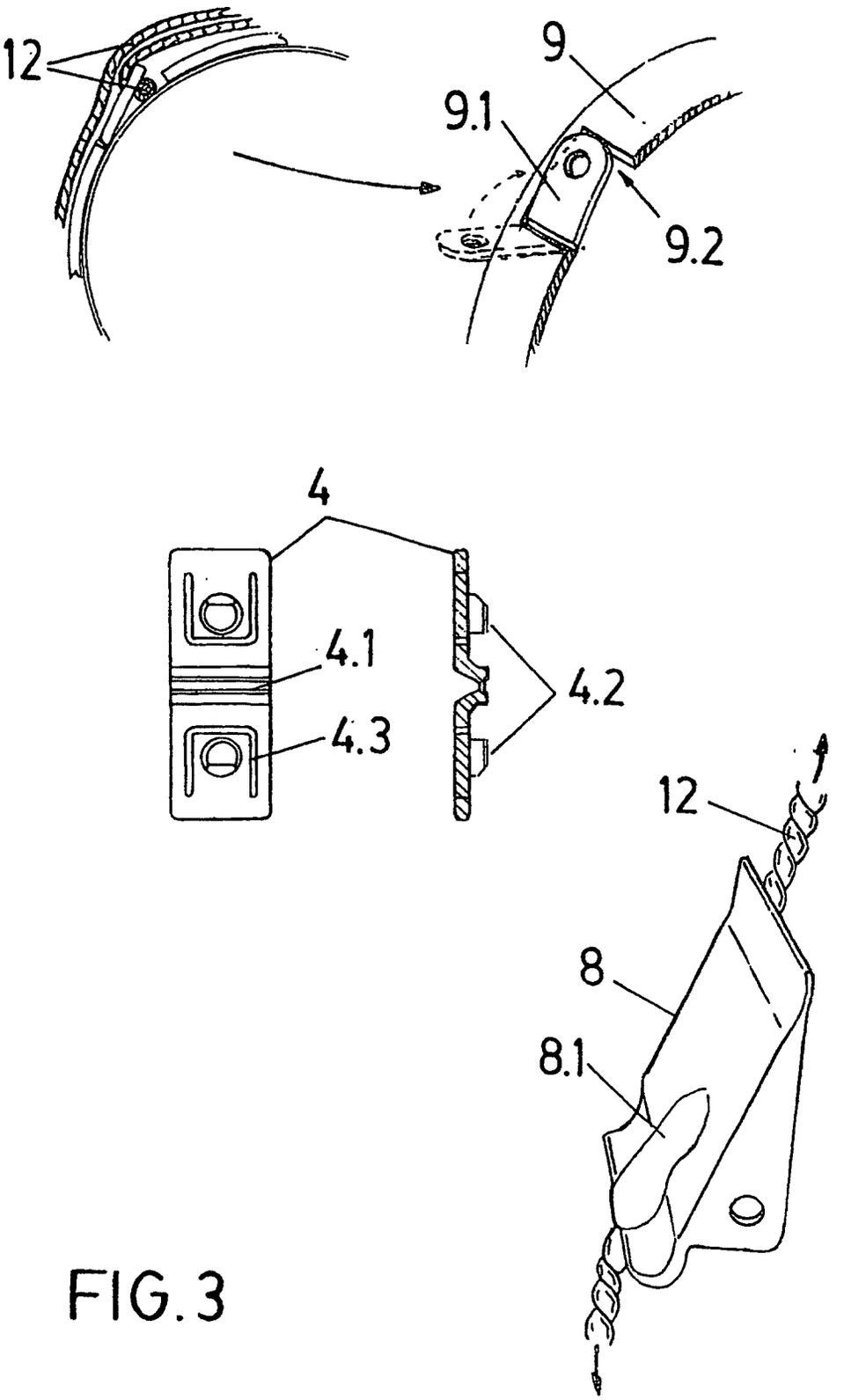


FIG.3

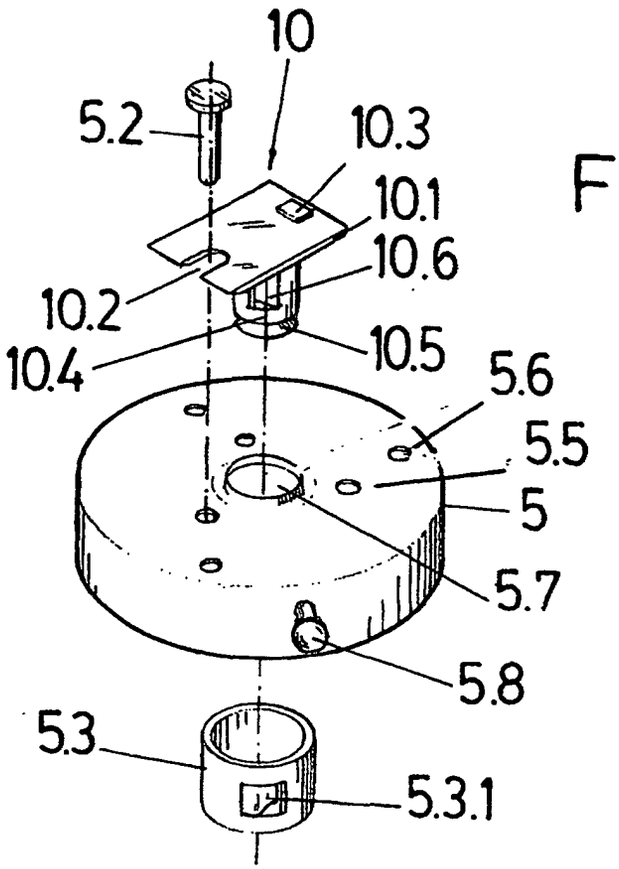


FIG. 4