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(54) **Joint device.**

(57) A joint device (100) includes a first mounting seat (1), a second mounting seat (2), a latch member (3) and a retention unit (4). The second mounting seat (2) is connected to and is rotatable relative to the first mounting seat (1). The latch member (3) is movable between a locking position and an unlocking position to control the rotation of the second mounting seat (2) relative to the first mounting seat (1). The retention unit (4) is configured to hold the latch member (3) at the unlocking position in response to movement of the latch member (3) from the locking position to the unlocking position.

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Title: JOINT DEVICE

The invention relates to a joint device, more particularly to a joint  
5 device for use in a baby basket.

A conventional baby basket is used to carry an infant, and includes a basket, a handle, and a joint device that interconnects rotatably the basket and the handle. The handle can be locked relative to the basket at an unfolded position by the joint device, where a distal portion of the  
10 handle is distal from the basket. To fold the handle relative to the basket, a pushbutton of the joint device needs to be pressed constantly to unlock the handle, such that the handle can be rotated relative to the basket to a folded position, where the distal portion of the handle is close to the basket. The abovementioned operation needs to be achieved by both hands of a user, and  
15 is inconvenient for the user.

Therefore, the object of the present invention is to provide a joint device that can overcome the aforesaid drawbacks associated with the prior arts.

Accordingly, a joint device of the present invention includes a first  
20 mounting seat, a second mounting seat, a latch member, an operating member and a retention unit. The first mounting seat is formed with at least one first locking groove. The second mounting seat is connected to the first mounting seat, is formed with at least one second locking groove, and is rotatable relative to the first mounting seat about a first axis. The second  
25 locking groove is aligned with the first locking groove in a direction of the first axis when the second mounting seat is at an unfolded position relative to the first mounting seat. The second locking groove is misaligned from the first locking groove when the second mounting seat leaves the unfolded position. The latch member has at least one latch portion, and is movable  
30 along the first axis between the first and second mounting seats. The latch portion of the latch member engages the first locking groove and the second

locking groove to prevent the rotation of the second mounting seat relative to the first mounting seat when the latch member is at a locking position. The latch portion of the latch member engages the first locking groove and is disengaged from the second locking groove to permit the rotation of the 5 second mounting seat relative to the first mounting seat when the latch member is at an unlocking position. The operating member is coupled to the latch member, and is capable of being driven to move along the first axis toward the first mounting seat to drive movement of the latch member from the locking position to the unlocking position so that the second mounting 10 seat can leave the unfolded position. The retention unit is configured to hold the latch member at the unlocking position in response to the movement of the latch member driven by the operating member from the locking position to the unlocking position to permit the rotation of the second mounting seat relative to the first mounting seat when the second mounting seat is at the 15 unfolded position.

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, of which:

Fig. 1 is a perspective view of a baby basket including a first 20 preferred embodiment of a joint device according to the invention, illustrating that a second mounting seat is disposed at an unfolded position;

Fig. 2 is another perspective view of the baby basket, illustrating that the second mounting seat is disposed at a folded position;

Fig. 3 is an exploded perspective view of the first preferred 25 embodiment;

Fig. 4 is a perspective view of the second mounting seat of the first preferred embodiment;

Fig. 5 is a perspective view of a latch member of the first preferred embodiment;

Fig. 6 is a fragmentary sectional view of the first preferred embodiment, illustrating the latch member in a locking position;

Fig. 7 is another fragmentary sectional view of the first preferred embodiment, illustrating the latch member in an unlocking position;

5 Fig. 8 is a fragmentary perspective view of the first preferred embodiment in which the second mounting seat is omitted;

Fig. 9 is another fragmentary perspective view of the first preferred embodiment in which the second mounting seat and the latch member are omitted;

10 Fig. 10 is an exploded perspective view of a second preferred embodiment of the joint device according to the invention;

Fig. 11 is another exploded perspective view of the second preferred embodiment;

15 Fig. 12 is a fragmentary sectional view of the second preferred embodiment, illustrating a latch member at a locking position;

Fig. 13 is another fragmentary sectional view of the second preferred embodiment, illustrating the latch member being held at an unlocking position;

20 Fig. 14 is an exploded perspective view illustrating a retention unit of the second preferred embodiment;

Fig. 15 is a fragmentary sectional view of the second preferred embodiment, illustrating the retention unit holding the latch member at an unlocking position;

25 Fig. 16 is a schematic perspective view of a third preferred embodiment of the joint device according to the invention;

Fig. 17 is a fragmentary sectional view of the third preferred embodiment, illustrating a latch member at a locking position; and

30 Fig. 18 is another fragmentary sectional view of the third preferred embodiment, illustrating the latch member being held at an unlocking position.

Before the present invention is described in greater detail, it should be noted that like elements are denoted by the same reference numerals throughout the disclosure.

Referring to Figs. 1 and 2, a baby basket is shown to include a basket 1a, a handle 1b, and two first preferred embodiments of joint devices 100 according to the present invention that interconnect rotatably the basket 1a and the handle 1b.

Referring further to Figs. 3 to 9, the first preferred embodiment includes a first mounting seat 1, a second mounting seat 2, a latch member 3, a retention unit 4, an operating member 5, a first resilient member 6 and a second resilient member 7.

The first mounting seat 1 has a first mounting segment 10 that is mounted with the basket 1a, and a first shaft segment 13 that extends along a first axis (A) (see Fig. 6). The second mounting seat 2 has a second mounting segment 20 that is mounted with the handle 1b, and a second shaft segment 23 that extends along the first axis (A) (see Fig. 6), that is connected to and inserted into the first shaft segment 13, and that is rotatable relative to the first shaft segment 13 about the first axis (A), such that the second mounting seat 2 is rotatable relative to the first mounting seat 1 about the first axis (A) between an unfolded position (see Fig. 1) and a folded position (see Fig. 2). A distal portion of the handle 1b is distal from the basket 1a when the second mounting seat is at the unfolded position, and is close to the basket 1a when the second mounting seat is at the folded position.

The first mounting seat 1 is formed with two first locking grooves 11 that are opposite to each other in a direction perpendicular to the first axis (A), and a plurality of first auxiliary locking grooves 12. The first locking grooves 11 and the first auxiliary locking grooves 12 are angularly-arranged about the first axis (A).

The second mounting seat 2 is formed with two second locking grooves 21 that are opposite to each other in a direction perpendicular to the first axis (A), and a plurality of second auxiliary locking grooves 22. The second locking grooves 21 and the second auxiliary locking grooves 22 are angularly-arranged about the first axis (A). Each of the second locking grooves 21 is aligned with a respective one of the first locking grooves 11 in the direction of the first axis (A) when the second mounting seat 2 is at the unfolded position, and is misaligned from the respective one of the first locking grooves 11 in the direction of the first axis (A) when the second mounting seat 2 leaves the unfolded position. Each of the second auxiliary locking grooves 21 is aligned with a respective one of the first auxiliary locking grooves 11 in the direction of the first axis (A) when the second mounting seat 2 is at the unfolded position, and is misaligned from the respective one of the first auxiliary locking grooves 11 in the direction of the first axis (A) when the second mounting seat 2 leaves the unfolded position. The second mounting seat 2 is further formed with a plurality of extension holes 2a and a plurality of communication holes 2b (see Fig. 4). In this embodiment, the extension holes 2a and the communication holes 2b are arranged alternately and angularly about the first axis (A).

The latch member 3 has a circular body 33 that is centered at the first axis (A), two latch portions 32 that are opposite to each other in a direction perpendicular to the first axis (A), and a plurality of auxiliary latch portions 31. The latch portions 32 and the auxiliary latch portions 31 are disposed on a periphery of the circular body 33.

The latch member 3 is disposed movably between the first and second mounting seats 1, 2. The circular body 33 of the latch member 3 is formed with a through hole 3b for extension of the first and second shaft segments 13, 23 of the first and second mounting seats 1, 2. The latch member 3 is movable along the first axis (A) between a locking position (see

Fig. 6) and an unlocking position (see Fig. 7) when the second mounting seat 2 is at the unfolded position.

When the latch member 3 is at the locking position, each of the latch portions 32 of the latch member 3 engages a respective one of the first locking grooves 11 and the respective one of the second locking grooves 21 aligned with the respective one of the first locking grooves 11 to prevent the rotation of the second mounting seat 2 relative to the first mounting seat 1, and each of the auxiliary latch portions 31 of the latch member 3 engages a respective one of the first auxiliary locking grooves 12 and the respective one of the second auxiliary locking grooves 22 aligned with the respective one of the first auxiliary locking grooves 12.

When the latch member 3 is at the unlocking position, each of the latch portions 32 of the latch member 3 engages the respective one of the first locking grooves 11 and is disengaged from the respective one of the second locking grooves 21 to permit the rotation of the second mounting seat 2 relative to the first mounting seat 1, and each of the auxiliary latch portions 31 of the latch member 3 engages the respective one of the first auxiliary locking grooves 12 and is disengaged from the respective one of the second auxiliary locking grooves 22. Each of the first and second auxiliary locking grooves 12, 22 has a dimension smaller than that of each of the latch portions 32 of the latch member 3 to prevent the latch portions 32 from being engaged therewith when the second mounting seat 2 leaves the unfolded position.

The operating member 5 is movable along the first axis (A), is co-rotatable with the second mounting seat 2, and has a button portion 51 that is disposed at one side of the second mounting seat 2 opposite to the latch member 3, and a plurality of rod portions 52, each of which extends from a periphery of the button portion 51 and through a respective one of the extension holes 2a in the direction of the first axis (A). The button portion 51 of the operating member 5 is capable of being pressed to move toward the

first mounting seat 1 to drive the rod portions 52 to push the latch member 3, and to drive movement of the latch member 3 from the locking position to the unlocking position when the second mounting seat 2 is at the unfolded position.

5           The first resilient member 6 has opposite ends arranged along the first axis (A) and connected respectively to the first mounting seat 1 and the latch member 3 for biasing the latch member 3 away from the first mounting seat 1 toward the locking position. In this embodiment, the first resilient member 6 is configured as a compression spring.

10          The second resilient member 7 has opposite ends arranged along the first axis (A) and connected respectively to the second mounting seat 2 and the operating member 5 for biasing the operating member 5 away from the latch member 3 to return to its initial position when the button portion 51 of the operating member 5 is released. In this embodiment, the second resilient member 7 is configured as a compression spring.

15          The retention unit 4 includes a plurality of barb-shaped first hooks 41 and a plurality of barb-shaped second hooks 42. The second hooks 42 are connected fixedly to an outer surrounding surface of the first shaft segment 13 of the first mounting seat 1. Each of the first hooks 41 extends from the periphery of the button portion 51 of the operating member 5 through a respective one of the communication holes 2b in the direction of the first axis (A).

20          The first hooks 41 correspond respectively in angular position to the second hooks 42 when the second mounting seat 2 is at the unfolded position, and are spaced apart from the second hooks 42 along the first axis (A) when the latch member 3 is at the locking position. When the button portion 51 of the operating member 5 is pressed to move toward the first mounting seat 1 to drive the movement of the latch member 3 from the locking position to the unlocking position, the button portion 51 simultaneously drives the first hooks 41 to move toward the first mounting

seat 1 to engage respectively the second hooks 42, such that the operating member 5 and the first hooks 41 are prevented from moving away from the first mounting seat 1 through the engagement between the first and second hooks 41, 42 to hold the latch member 3 at the unlocking position to permit  
5 the rotation of the second mounting seat 2 relative to the first mounting seat 1 when the second mounting seat 2 is at the unfolded position and when the operating member 5 is released. The latch member 3 is further formed with a plurality of through grooves 3a that are in spatial communication with the through hole 3b for receiving respectively the second hooks 42 when the  
10 latch member 3 is at the unlocking position.

When the second mounting seat 2 rotates relative to the first mounting seat 1 to leave the unfolded position, each of the first hooks 41 is misaligned from the respective one of the second hooks 42 in the direction of the first axis (A) to be disengaged from the respective one of the second  
15 hooks 42 to release the latch member 3. At this time, the latch member 3 is biased by the first resilient member 6 to abut against the second mounting seat 2 and is prevented from moving to the locking position due to the misalignment between the first and second locking grooves 11, 21, and the operating member 5 is biased to move away from the first mounting seat 1  
20 to its initial positions by the second resilient member 7 to separate the first hooks 41 from the second hooks 42 along the first axis (A), such that when the second mounting seat 2 rotates back to the unfolded position, the first hooks 41 cannot engage the second hooks 42 to hold the latch member 3 at the unlocking position, and the latch member 3 is biased by the first  
25 resilient member 6 to the locking position.

To sum up, by virtue of the retention unit 4, the latch member 3 can be moved from the locking position to the unlocking position, and be retained at the unlocking position to permit the rotation of the second mounting seat 2 relative to the first mounting seat 1 through a single  
30 depression operation of the operating member 5 when the second mounting

seat is at the unfolded position. Referring back to Figs. 1 and 2, in this invention, during a fold operation of the handle 1b relative to the basket 1a, the operating member 5 of one of the joint devices 100 is depressed to drive the latch member 3 of the one of the joint device 100 to be held at the 5 unlocking position, and the operating member 5 of the other one of the joint devices 100 is subsequently depressed to drive the latch member 3 of the other one of the joint device 100 to be held at the unlocking position. Then, the handle 1b can be rotated relative to the basket 1a to the folded position. The abovementioned fold operation can be achieved by only one hand of a 10 user, and is more convenient than that of the conventional baby basket.

Referring to Figs. 10 to 15, a second preferred embodiment of the joint device 100 according to the present invention is similar to the first preferred embodiment. What is different is that the retention unit 4' of the second preferred embodiment includes a locking groove 42', a locking block 15 41' and a third resilient member 43'.

The locking groove 42' is formed in one of the latch portions 32 of the latch member 3.

The locking block 41' is mounted to the second mounting seat 2, and is movable relative to the second mounting seat 2 along a second axis 20 (B) (see Fig. 12) of the second mounting seat 2 that is oblique to the first axis (A).

The third resilient member 43' has opposite ends arranged along the second axis (B) and connected respectively to the locking block 41' and the second mounting seat 2 for biasing the locking block 41' toward the latch 25 member 3. In this embodiment, the third resilient member 43' is configured as a compression spring.

The locking groove 42' is aligned with the second axis (B) when the second mounting seat 2 is at the unfolded position and when the latch member 3 is at the unlocking position (see Fig. 13), such that the locking 30 block 41' is biased by the third resilient member 43' to engage the locking

groove 42' to hold the latch member 3 at the unlocking position in response to the movement of the latch member 3 from the locking position to the unlocking position driven by the operating member 5 to permit the rotation of the second mounting seat 2 relative to the first mounting seat 1.

5       The first mounting seat 1 is further formed with a first groove 1c that is registered with the locking groove 42' when the latch member 3 is at the unlocking position. The second mounting seat 2 is further formed with a second groove 2c for extension of the locking block 41' therethrough.

10      The first mounting seat 1 has a groove defining surface that defines the first groove 1c. The locking block 41' has an inclined surface 413' for contacting slidably the groove defining surface of the first mounting seat 1, so that the locking block 41' is pushed by the groove defining surface to be smoothly disengaged from the locking groove 42' to release the latch member 3 when the second mounting seat 2 leaves the unfolded position.

15      The locking block 41' further has an abutment surface 412' for contacting the groove defining surface when the second mounting seat 2 is at the unfolded position, so as to limit the rotation angle of the second mounting seat 2 relative to the first mounting seat 1.

Referring to Fig. 13, it is noted that there is a gap (G) between the  
 20 latch member 3 and an interior end surface 25 of the second mounting seat 2 when the latch member 3 is at the unlocking position and when the second mounting seat 2 is at the unfolded position. Therefore, when the second mounting seat 2 leaves the unfolded position, the latch member 3 is released by the retention unit 4' and is biased by the first resilient member 6 to move  
 25 to an intermediate position, where the latch member 3 abuts against the interior end surface 25 of the second mounting seat 2 and is prevented from moving to the locking position due to the misalignment between the first and second locking grooves 11, 21, and where the locking groove 42' is not registered with the first groove 1c (i.e., the locking groove 42' is misaligned  
 30 from the second axis (B) when the second mounting seat 2 is at the unfolded

position), such that the locking block 41' cannot engage the locking groove 42' to hold the latch member 3 at the unlocking position and the latch member 3 is biased back to the locking position by the first resilient member 6 when the second mounting seat 2 rotates back to the unfolded position.

Referring to Figs. 16 to 18, a third preferred embodiment of the joint device 100 according to the present invention is similar to the second preferred embodiment. The retention unit 4" of the third preferred embodiment also includes a locking groove 42", a locking block 41" and a third resilient member 43". What is different is that the locking block 41" of the retention unit 4" is formed with a retaining groove 41a" that extends along the second axis B. The second mounting seat 2 further has a protrusion 2d that is retained in the retaining groove 41a". The third resilient member 43" is retained in the retaining groove 41a", and has opposite ends connected respectively to the locking block 41" and the protrusion 2d for biasing the locking block 41" toward the latch member 3.

Referring to Fig. 18, like the second preferred embodiment, there is a gap (G) between the latch member 3 and the interior end surface 25 of the second mounting seat 2 when the latch member 3 is at the unlocking position and when the second mounting seat 2 is at the unfolded position. Therefore, when the second mounting seat 2 leaves the unfolded position, the latch member 3 is biased by the first resilient member 6 to move to an intermediate position, where the latch member 3 abuts against the interior end surface 25 of the second mounting seat 2, such that the locking block 41" cannot engage the locking groove 42" to hold the latch member 3 at the unlocking position when the second mounting seat 2 rotates back to the unfolded position.

It is noted that, in the second and third preferred embodiments of this invention, the operating member 5 may be configured not to be co-rotatable with the second mounting seat 2 (i.e., the operating member 5 may

not rotate about the first axis (A) when the second mounting seat 2 rotates relative to the first mounting seat 1).

## Conclusies

1. Scharnierinrichting (100) gekenmerkt door:
  - een eerste bevestigingsdeel (1) dat is voorzien van ten minste één eerste vergrendelgroef (11);
    - een tweede bevestigingsdeel (2), dat verbonden is met genoemde
  - 5 eerste bevestigingsdeel (1), voorzien is van tenminste één tweede vergrendelgroef (21) en ten opzichte van genoemde eerste bevestigingsdeel (1) roteerbaar is om een eerste as (A), waarbij genoemde tweede vergrendelgroef (21) met genoemde eerste vergrendelgroef (11) is uitgelijnd in een richting van de eerste as (A) wanneer genoemde tweede bevestigingsdeel (2) zich in een uitgeklapte positie bevindt ten opzichte van genoemde eerste bevestigingsdeel (1), waarbij genoemde tweede vergrendelgroef (21) on-uitgelijnd wordt ten opzichte van genoemde eerste vergrendelgroef (11) wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat;
  - 10 een grendelorgaan (3) dat voorzien is van ten minste één grendelgedeelte (32) en beweegbaar is langs de eerste as (A) tussen genoemde eerste en tweede bevestigingsdeel (1, 2), waarbij genoemde grendelgedeelte (32) van genoemde grendelorgaan (3) aangrijpt op genoemde eerste vergrendelgroef (11) en genoemde tweede vergrendelgroef
  - 20 (21) om de rotatie te verhinderen van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1) wanneer genoemde grendelorgaan (3) zich in een vergrendelpositie bevindt, waarbij genoemde grendelgedeelte (32) van genoemde grendelorgaan (3) aangrijpt op genoemde eerste vergrendelgroef (11) en ontkoppeld is van genoemde tweede vergrendelgroef (21) om de rotatie van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1)

toe te staan wanneer genoemde grendelorgaan (3) zich in een ontgrendelpositie bevindt;

- een bedieningsorgaan (5) dat gekoppeld is aan genoemde grendelorgaan (3) en geschikt is om langs de eerste as (A) richting genoemde eerste bevestigingsdeel (1) te worden bewogen om genoemde grendelorgaan (3) van de vergrendelpositie te bewegen naar de ontgrendelpositie zodat genoemde tweede bevestigingsdeel (2) de uitgeklapte positie kan verlaten; en
  - een vasthoudeenheid (4, 4', 4'') die is geconfigureerd om genoemde grendelorgaan (3) in de ontgrendelpositie te houden in reactie op de beweging van genoemde door genoemde bedieningsorgaan (5) bewogen grendelorgaan (3) van de vergrendelpositie naar de ontgrendelpositie om de rotatie van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1) toe te staan wanneer genoemde tweede bevestigingsdeel (2) zich in de uitgeklapte positie bevindt.
2. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde tweede bevestigingsdeel (2) geconfigureerd is om te verhinderen dat genoemde grendelorgaan (3) naar de vergrendelpositie beweegt door on-uitlijning tussen genoemde eerste en tweede vergrendelgroeven (11, 21)
  - 20 om de rotatie van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1) toe te staan wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat.
  3. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde vasthoudeenheid (4, 4', 4'') geconfigureerd is om genoemde grendelorgaan (3) los te laten wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat.
  4. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde vasthoudeenheid (4, 4', 4'') geconfigureerd is om genoemde

grendelorgaan (3) niet in de ontgrendelpositie te houden wanneer genoemde tweede bevestigingsdeel (2) roteert terug naar de uitgeklapte positie.

5. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde eerste bevestigingsdeel (1) is uitgevoerd met twee genoemde eerste vergrendelgroeven (11) die tegenover elkaar zijn geplaatst in een richting dwars op de eerste as (A), waarbij genoemde tweede bevestigingsdeel (2) is uitgevoerd met twee genoemde tweede vergrendelgroeven (21) die tegenover elkaar zijn geplaatst in een richting dwars op de eerste as (A), waarbij genoemde grendelorgaan (3) twee genoemde grendelgedeelten (32) heeft die tegenover elkaar zijn geplaatst in een richting dwars op de eerste as (A).
- 10 6. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde eerste bevestigingsdeel (1) verder is uitgevoerd met met ten minste één eerste hulp-vergrendelgroef (12), waarbij genoemde tweede bevestigingsdeel (2) verder is uitgevoerd met tenminste één tweede hulp-vergrendelgroef (22) die overeenkomt met genoemde eerste hulp-vergrendelgroef (12), waarbij genoemde grendelorgaan (3) verder ten minste één hulp-grendelgedeelte (31) omvat dat overeenkomt met genoemde eerste hulp-vergrendelgroef (12) en genoemde tweede hulp-vergrendelgroef (22), waarbij genoemde eerste hulp-vergrendelgroef (12) en genoemde tweede hulp-vergrendelgroef (22) een afmeting hebben die kleiner is dan die van genoemde grendelgedeelte (32) van genoemde grendelorgaan (3) om te verhinderen dat genoemde grendelgedeelte (32) daarmee aangrijpt wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat.
- 15 7. Scharnierinrichting (100) volgens conclusie 1, verder gekenmerkt door: een eerste veerkrachtig orgaan (6) dat tegenover elkaar gelegen einden heeft die zijn aangebracht langs de eerste as (A) en die verbonden zijn met respectievelijk genoemde eerste bevestigingsdeel (1) en genoemde

grendelorgaan (3) om genoemde grendelorgaan (3) voor te spannen in een richting van genoemde eerste bevestigingsdeel (1) naar de vergrendelpositie.

8. Scharnierinrichting (100) volgens conclusie 1, verder gekenmerkt door: een tweede veerkrachtig orgaan (7) dat tegenover elkaar gelegen einden heeft die zijn aangebracht langs de eerste as (A) en die verbonden zijn met respectievelijk genoemde tweede bevestigingsdeel (2) en genoemde bedieningsorgaan (5) om genoemde bedieningsorgaan(5) voor te spannen in een richting weg van genoemde grendelorgaan (3) om terug te keren naar de oorspronkelijke positie.
- 10 9. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde vasthoudeenheid (4) omvat:
  - een eerste haak (41) die vast verbonden is met genoemde bedieningsorgaan (5); en
  - een tweede haak (42) die vast verbonden is met genoemde eerste bevestigingsdeel (1), waarbij genoemde eerste haak (41) overeenkomt met genoemde tweede haak (42), waarbij genoemde bedieningsorgaan (5) in staat is om richting genoemde eerste bevestigingsdeel (1) te worden bewogen teneinde genoemde grendelorgaan (3) van de vergrendelpositie naar de ontgrendelpositie te doen bewegen en genoemde eerste haak (41) genoemde tweede haak (42) te laten aangrijpen wanneer genoemde tweede bevestigingsdeel (2) zich in de uitgeklapte positie bevindt, teneinde genoemde grendelorgaan (3) in de ontgrendelpositie te houden.
10. Scharnierinrichting (100) volgens conclusie 9, verder gekenmerkt doordat genoemde eerste haak (41) on-uitgelijnd is met genoemde tweede haak (42) in de richting van de eerste as (A) om ontkoppeld te worden van genoemde tweede haak (42) om genoemde grendelorgaan (3) los te laten wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat.

11. Scharnierinrichting (100) volgens conclusie 9, verder gekenmerkt doordat:

genoemde tweede bevestigingsdeel (2) verder is uitgevoerd met een doorlaatgat (2a) en een verbindingsgat (2b); en

5 genoemde bedieningsorgaan (5) is voorzien van:

een knopgedeelte (51) dat is aangebracht aan een zijde van genoemde tweede bevestigingsdeel (2) die tegenover genoemde grendelorgaan (3) ligt, waarbij genoemde eerste haak (41) zich van genoemde knopgedeelte (51) uitstrekken door genoemd verbindingsgat (2b) in 10 de richting van de eerste as (A); en

een staafgedeelte (52) dat zich vanaf genoemde knopgedeelte (51) uitstrekken en zich uitstrekken door genoemde doorlaatgat (2a) in de richting van de eerste as (A), waarbij genoemde knopgedeelte (51) in staat is om te worden bewogen richting genoemde eerste bevestigingsdeel 15 (1) om genoemde staafgedeelte (52) tegen genoemde grendelorgaan (3) te laten duwen om genoemde grendelorgaan (3) van de vergrendelpositie naar de ontgrendelpositie te laten bewegen en om genoemde eerste haak (41) genoemde tweede haak (42) te laten aangrijpen om genoemde grendelorgaan (3) in de ontgrendelpositie te houden wanneer genoemde tweede 20 bevestigingsdeel (2) zich in de uitgeklapte positie bevindt.

12. Scharnierinrichting (100) volgens conclusie 1, gekenmerkt doordat genoemde vasthoudeenheid (4', 4'') is voorzien van:

een vergrendelgroef (42', 42'') die in genoemde grendelorgaan (3) is gevormd; en

25 een vergrendelblok (41', 41'') dat aan genoemde tweede bevestigingsdeel (2) is bevestigd en beweegbaar is ten opzichte van genoemde tweede bevestigingsdeel (2) langs een tweede as (B) van genoemde tweede bevestigingsdeel (2) die schuin staat ten opzichte van de

eerste as (A), waarbij genoemde vergrendelgroef (42', 42'') is uitgelijnd met genoemde tweede as (B) wanneer genoemde tweede bevestigingsdeel (2) zich in de uitgeklapte positie bevindt en wanneer genoemde grendelorgaan (3) zich in de ontgrendelpositie bevindt, zodanig dat genoemde vergrendelblok

- 5 (41', 41'') kan worden voorgespannen om aan te grijpen op genoemde vergrendelgroef (42', 42'') om genoemde grendelorgaan (3) in de ontgrendelpositie te houden.

13. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat genoemde vergrendelgroef (42', 42'') in genoemde grendelgedeelte  
10 (32) van genoemde grendelorgaan (3) is voorzien.

14. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat genoemde vasthoudeenheid (4', 4'') verder een derde veerkrachtig orgaan (43', 43'') omvat dat verbonden is met genoemde vergrendelblok (41', 41'') om genoemde vergrendelblok (41', 41'') voor te spannen richting  
15 genoemde grendelorgaan (3), zodanig dat genoemde vergrendelblok (41', 41'') wordt voorgespannen door genoemde derde veerkrachtige orgaan (43', 43'') om aan te grijpen op genoemde vergrendelgroef (42', 42'') om genoemde grendelorgaan (3) in de ontgrendelpositie te houden in reactie op de beweging van genoemde grendelorgaan (3) van de vergrendelpositie naar de  
20 ontgrendelpositie om de rotatie van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1) toe te staan wanneer genoemde tweede bevestigingsdeel (2) zich in de uitgeklapte positie bevindt en wanneer genoemde bedieningsorgaan (5) wordt losgelaten.

15. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat genoemde vergrendelblok (41', 41'') wordt losgelaten van genoemde vergrendelende groef (42', 42'') om genoemde grendelorgaan (3) los te laten door de on-uitlijning tussen genoemde vergrendelingsgroef (42', 42'') en

genoemde tweede as (B) wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat.

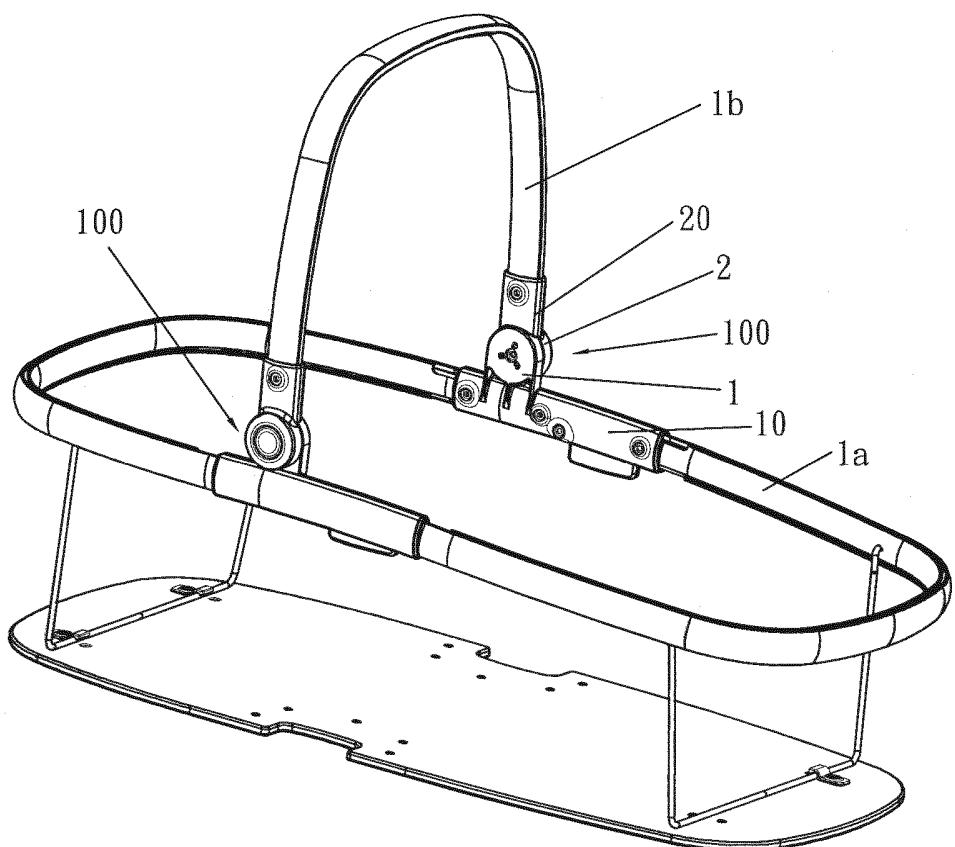
16. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat, wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat, genoemde grendelorgaan (3) is geconfigureerd om naar een tussenpositie tussen de vergrendel- en ontgrendelpositie te worden bewogen, waarin genoemde grendelgedeelte (32) van genoemde grendelorgaan (3) ontkoppeld is van genoemde tweede vergrendelgroef (21) om de rotatie van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel (1) mogelijk te maken, zodanig dat genoemde vergrendelblok (41', 41'') niet kan aangrijpen op genoemde vergrendelgroef (42', 42'') om genoemde grendelorgaan (3) in de ontgrendelpositie te houden wanneer genoemde tweede bevestigingsdeel (2) roteert terug naar de uitgeklapte positie.
17. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat:
  - genoemde eerste bevestigingsdeel (1) is voorzien van een eerste groef (1c) die samenvalt met genoemde vergrendelgroef (42', 42'') wanneer genoemde grendelorgaan (3) zich in de ontgrendelpositie bevindt;
  - genoemde vergrendelblok (41', 41'') een schuin oppervlak (413') omvat voor het verschuifbaar contact maken van een groef-definiërend oppervlak van genoemde eerste bevestigingsdeel (1) dat genoemde eerste groef (1c) definieert, zodat genoemde vergrendelblok (41', 41'') door genoemde groef-definiërende oppervlak wordt geduwd om van genoemde vergrendelgroef (42', 42'') te worden ontkoppeld om genoemde grendelorgaan (3) los te laten wanneer genoemde tweede bevestigingsdeel (2) de uitgeklapte positie verlaat; en

genoemde tweede bevestigingsdeel (2) is voorzien van een tweede groef (2c) voor het genoemde vergrendelende blok (41', 41'') daardoorheen doorlaten.

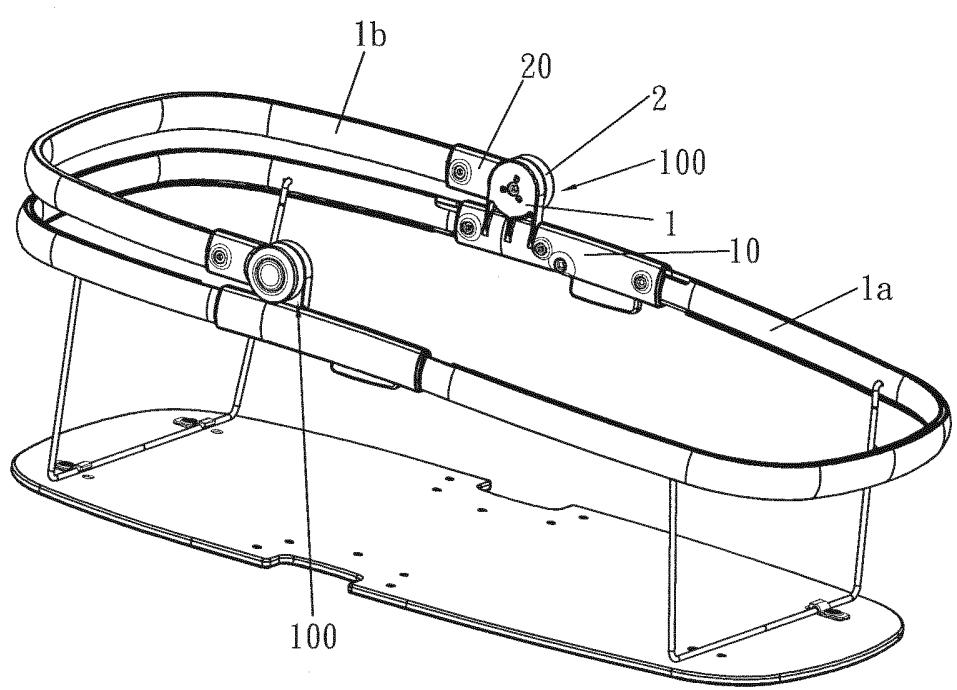
18. Scharnierinrichting (100) volgens conclusie 17, verder gekenmerkt doordat genoemde vergrendelblok (41', 41'') verder een aanslagoppervlak (412) omvat voor het contact maken met genoemde groef-definiërende oppervlak wanneer genoemde tweede bevestigingsdeel (2) zich in de uitgeklapte positie bevindt, om zo de rotatiehoek van genoemde tweede bevestigingsdeel (2) ten opzichte van genoemde eerste bevestigingsdeel te beperken (1).

19. Scharnierinrichting (100) volgens conclusie 12, verder gekenmerkt doordat genoemde vergrendelblok (41'') met een vasthoudgroef (41a'') is voorzien die zich uitstrek langs de tweede as (B), waarbij genoemde tweede bevestigingsdeel (2) verder een uitsteeksel (2d) omvat dat wordt vastgehouden in genoemde vasthoudgroef (41a'').

20. Scharnierinrichting (100) volgens conclusie 19, verder gekenmerkt door een derde veerkrachtig orgaan (43') dat wordt vastgehouden in genoemde vasthoudgroef (41a') en dat tegenoverliggende einden heeft die verbonden zijn met respectievelijk genoemde vergrendelblok (41'') en genoemde uitsteeksel (2d) voor het voorspannen van genoemde vergrendelblok (41') richting genoemde grendelorgaan (3).

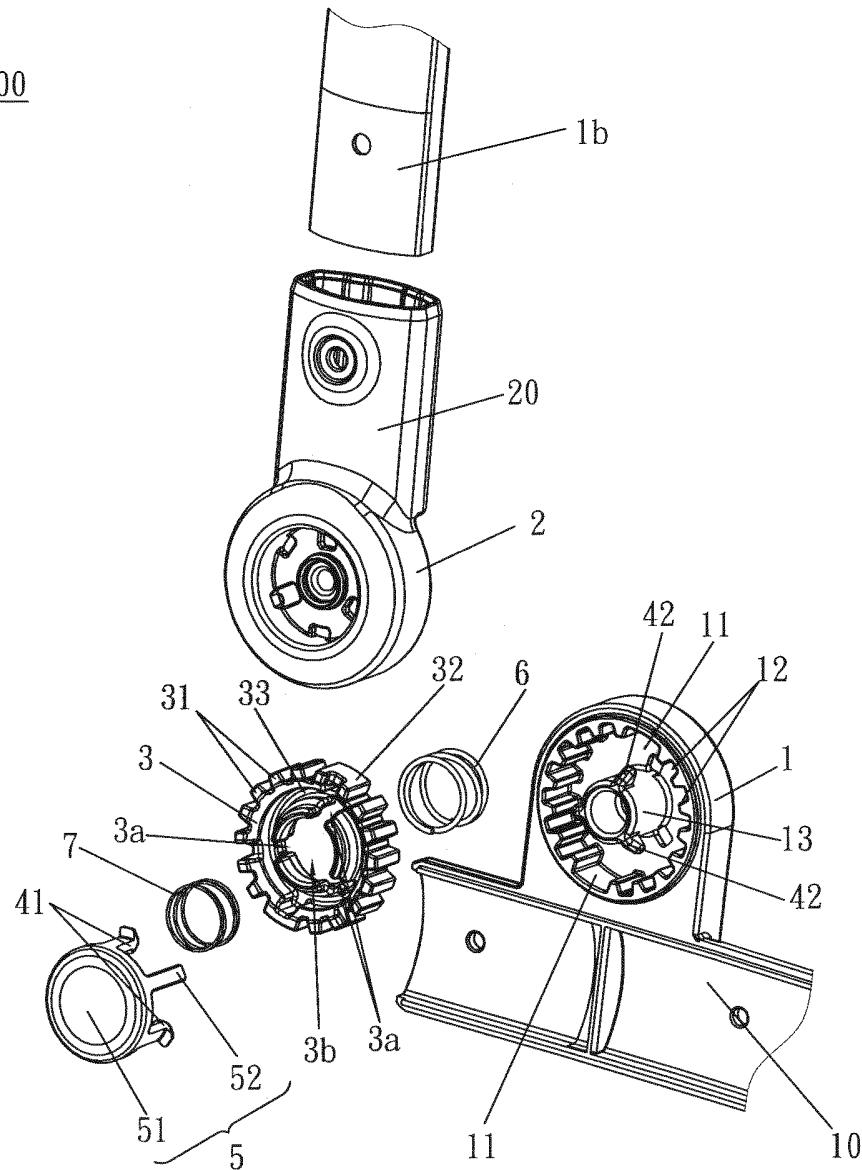


F I G. 1

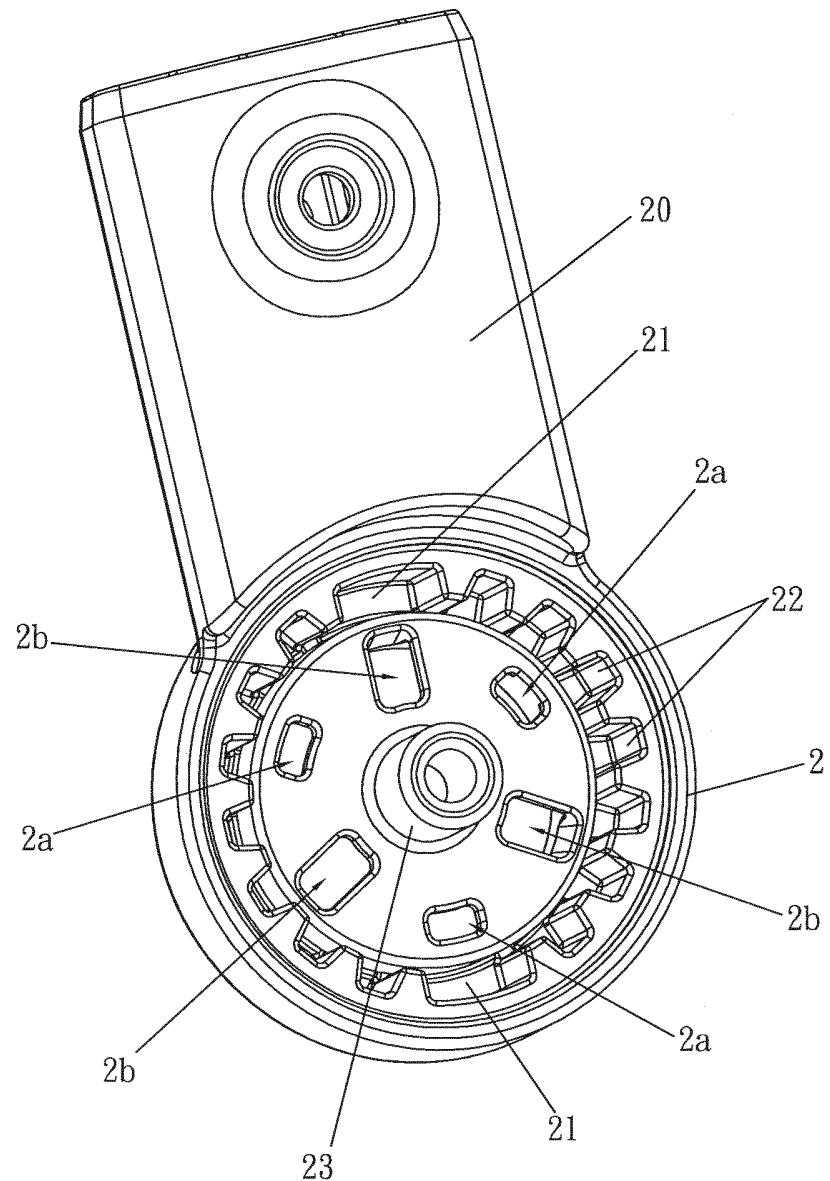


F I G. 2

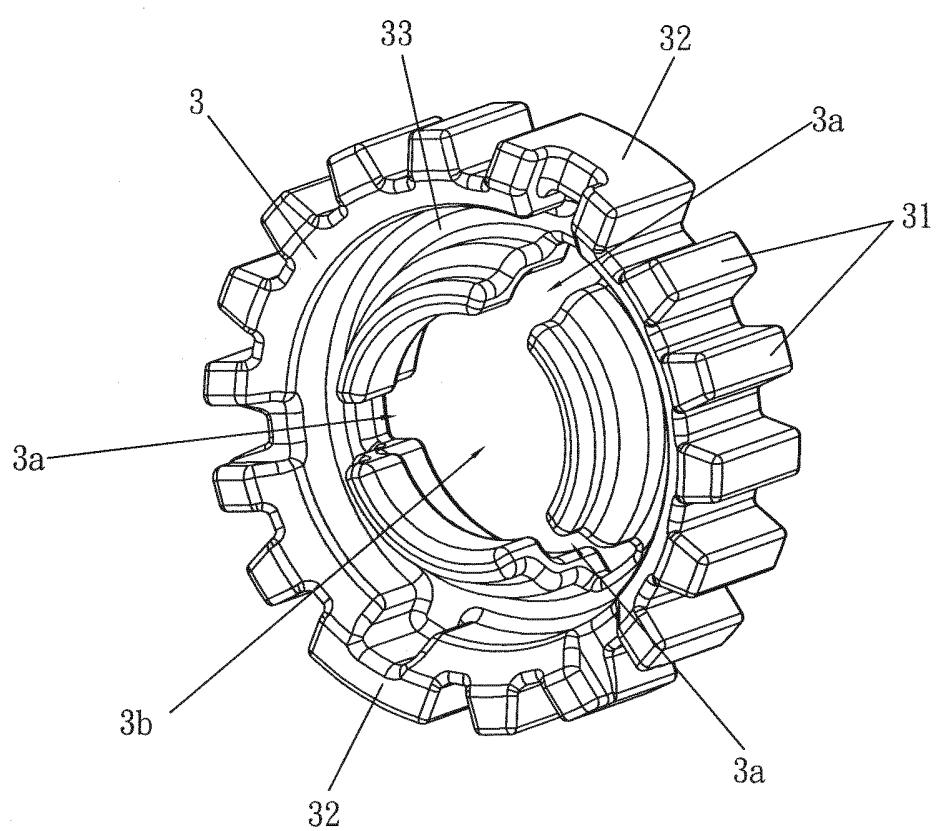
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F I G. 3

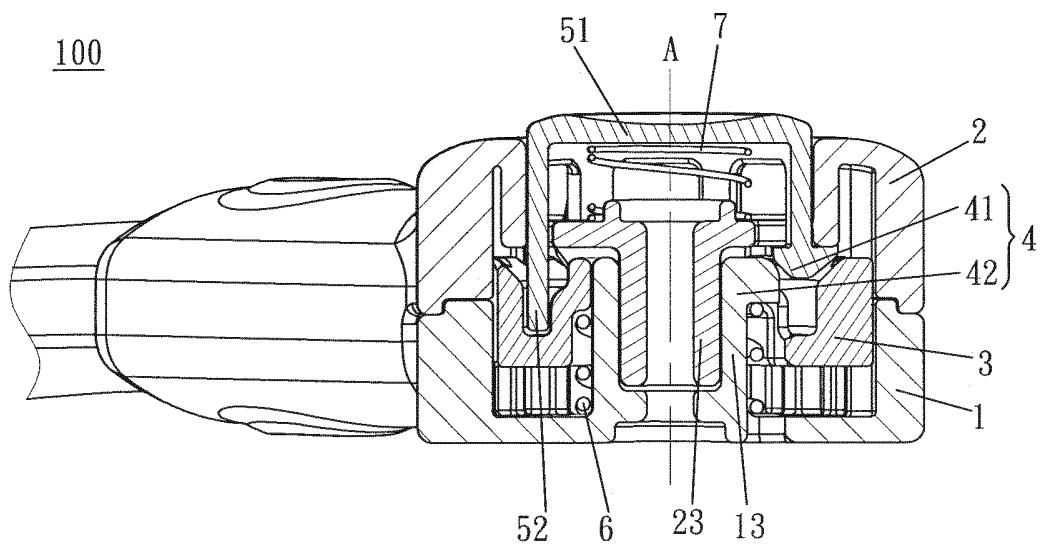


F I G. 4



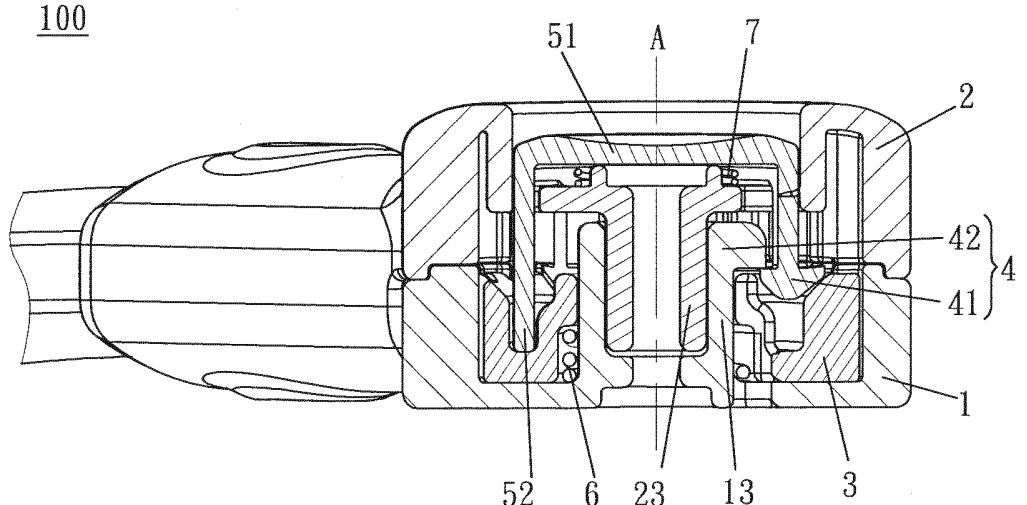
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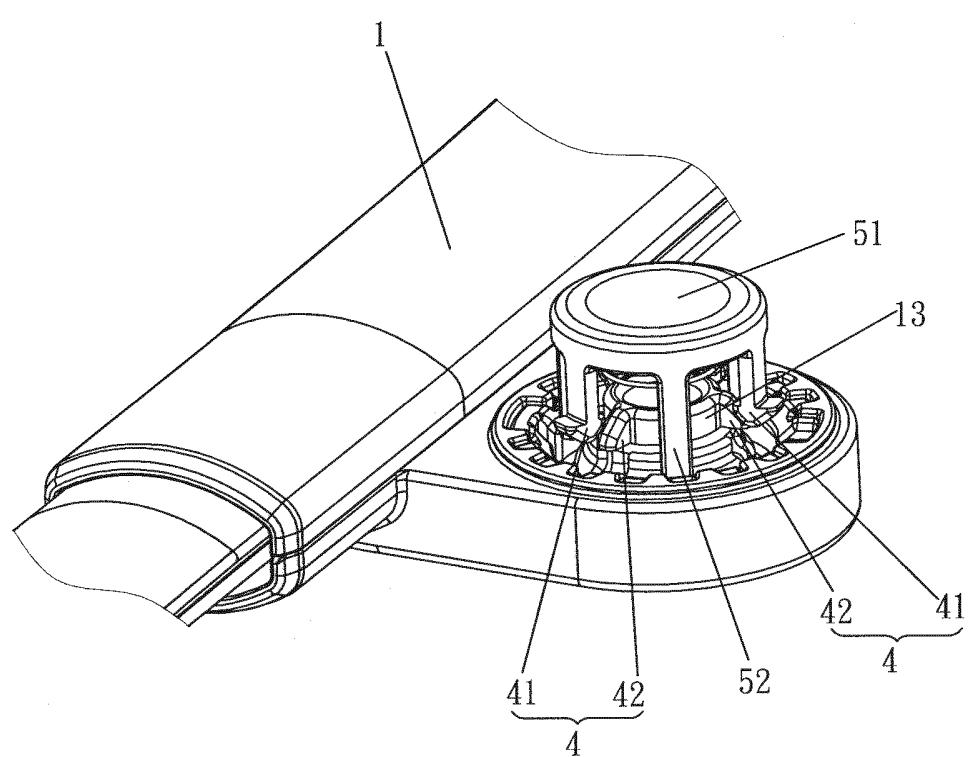


F I G. 6

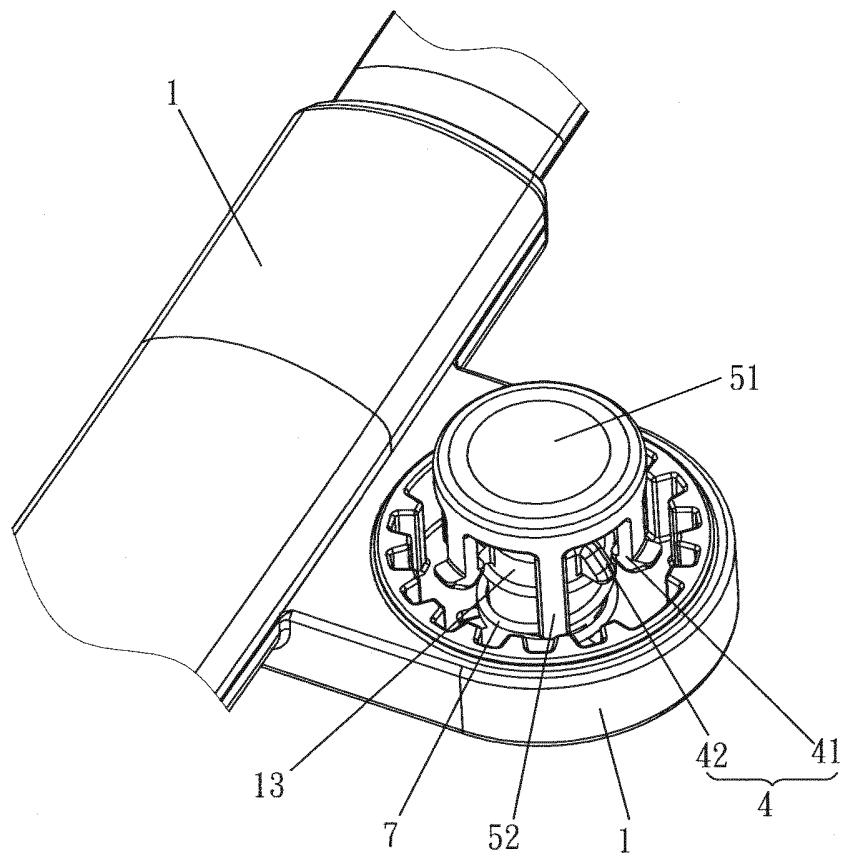
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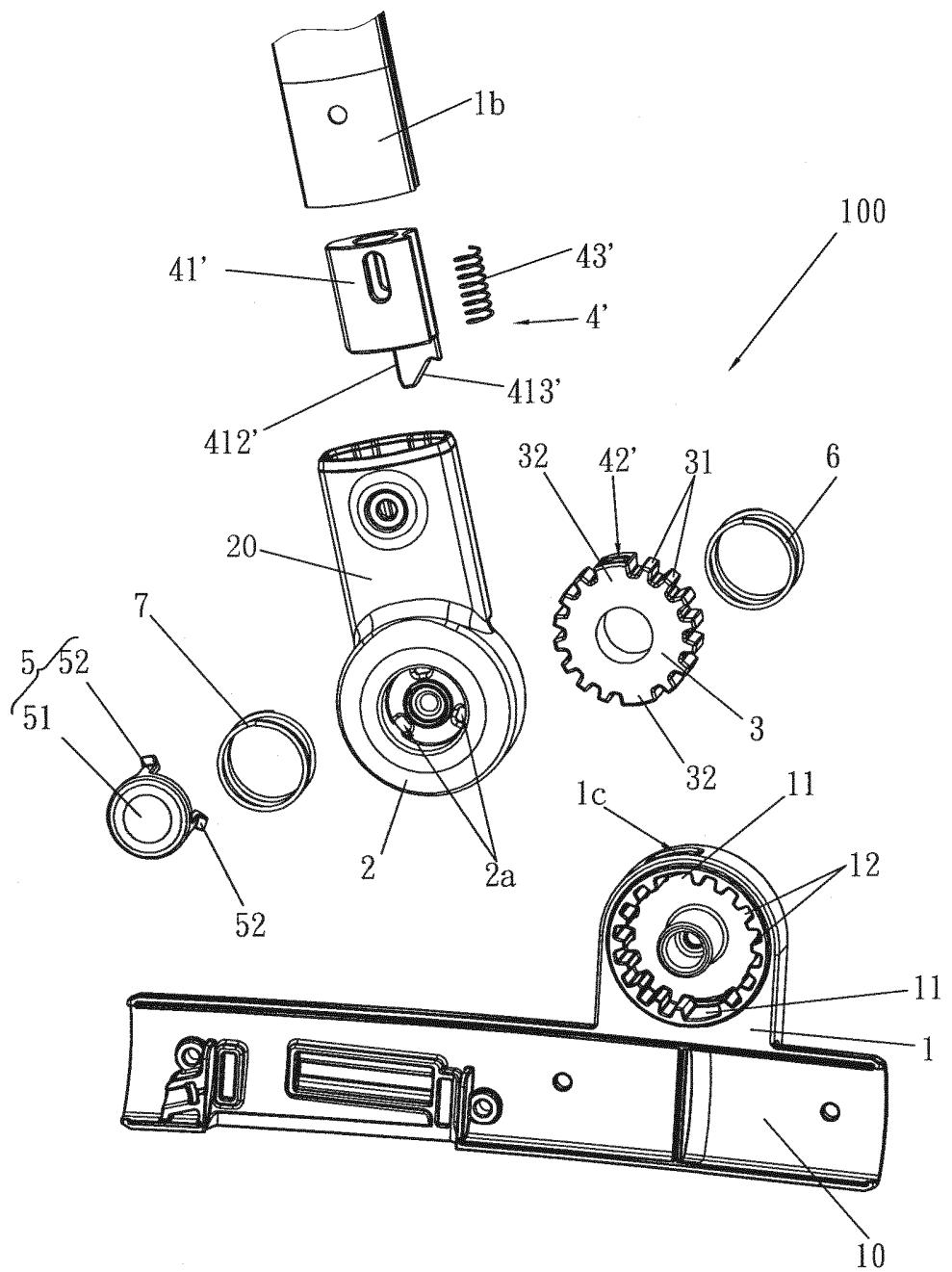
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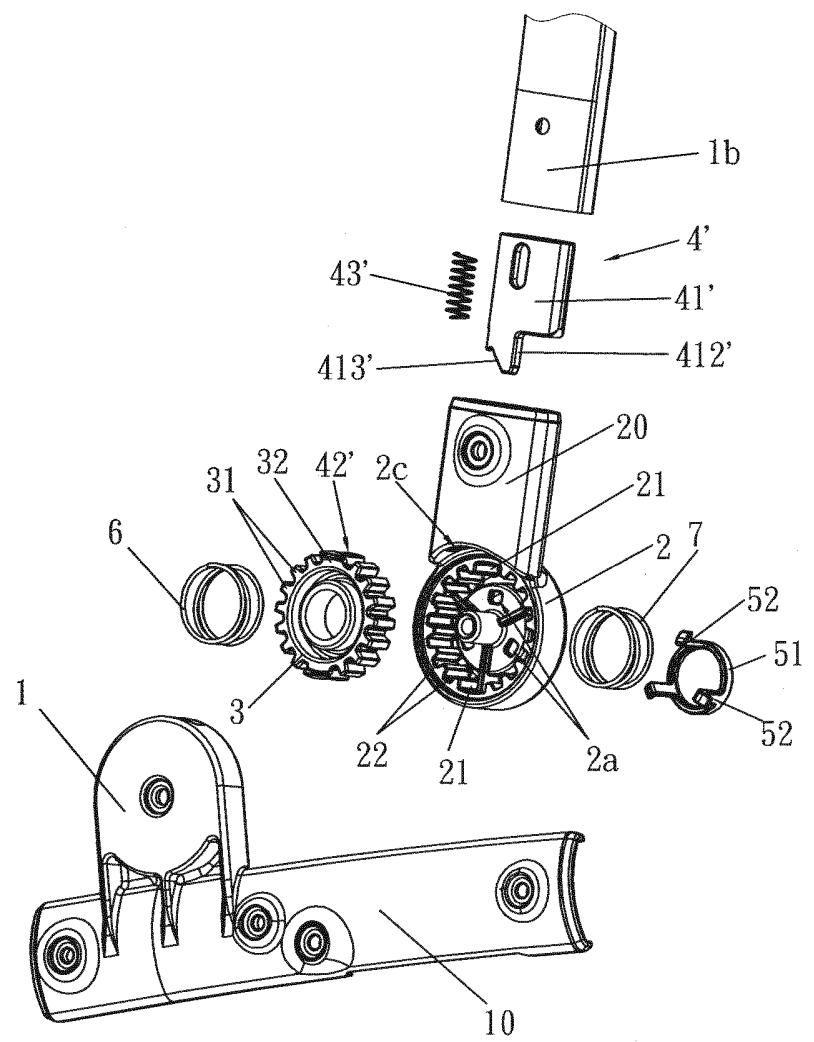
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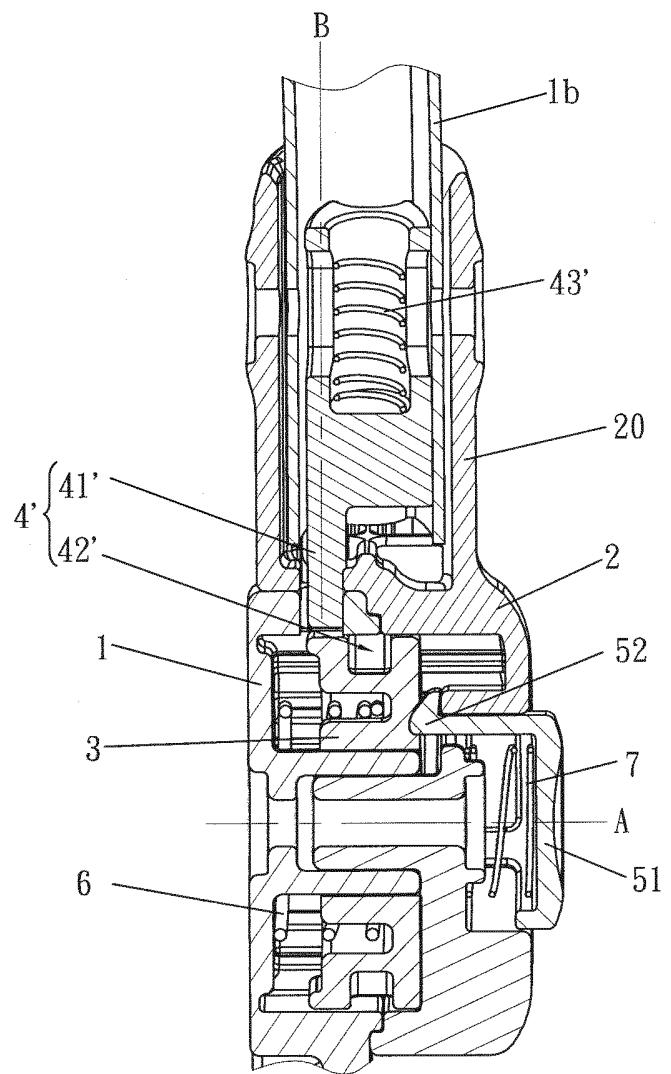
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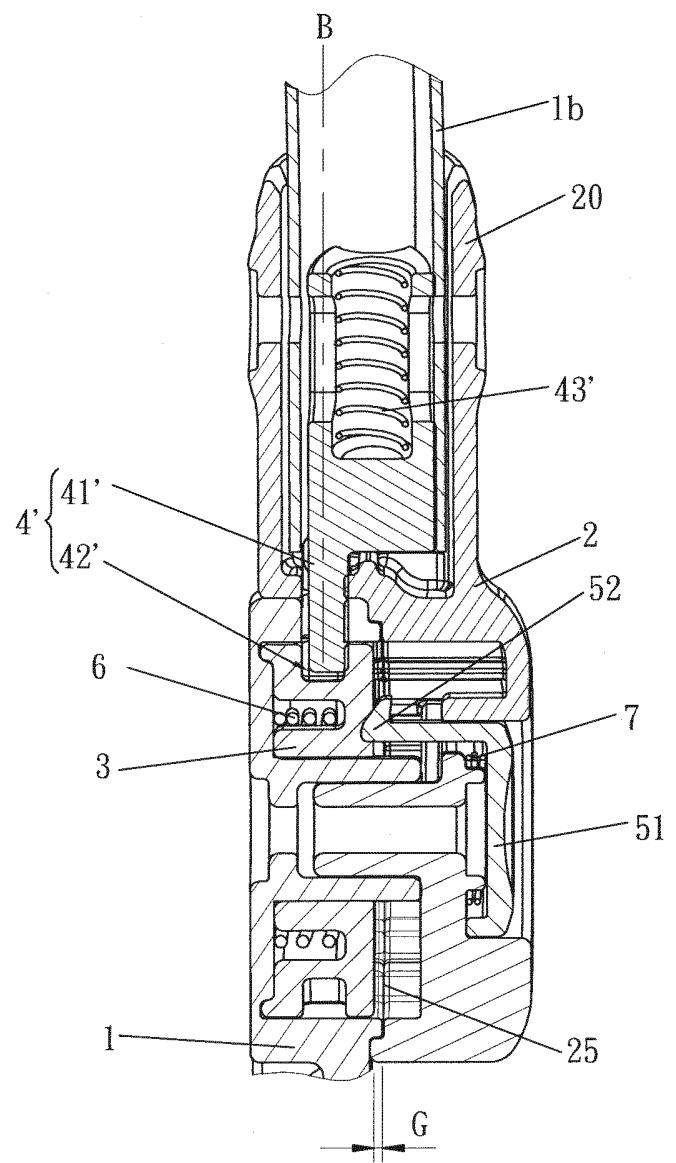
F I G. 10



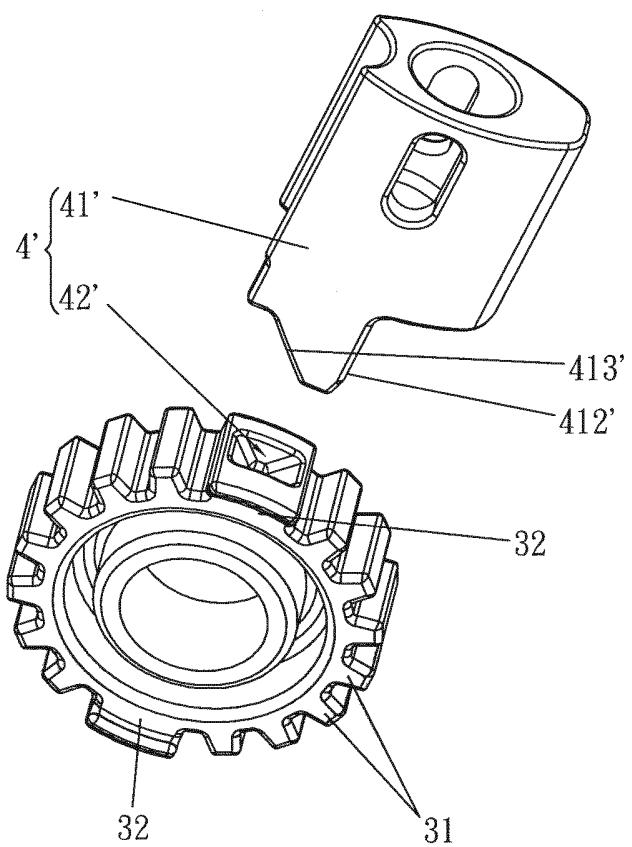
F I G. 11



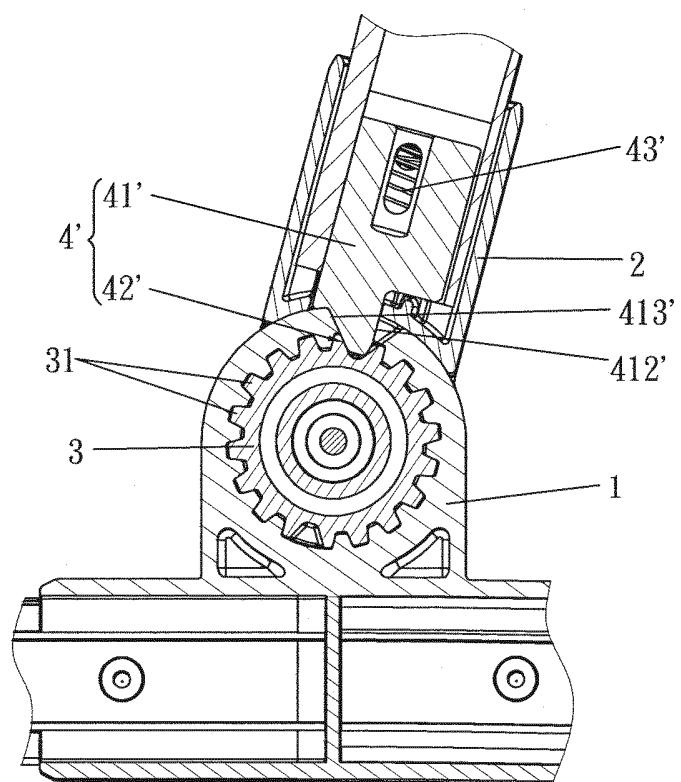
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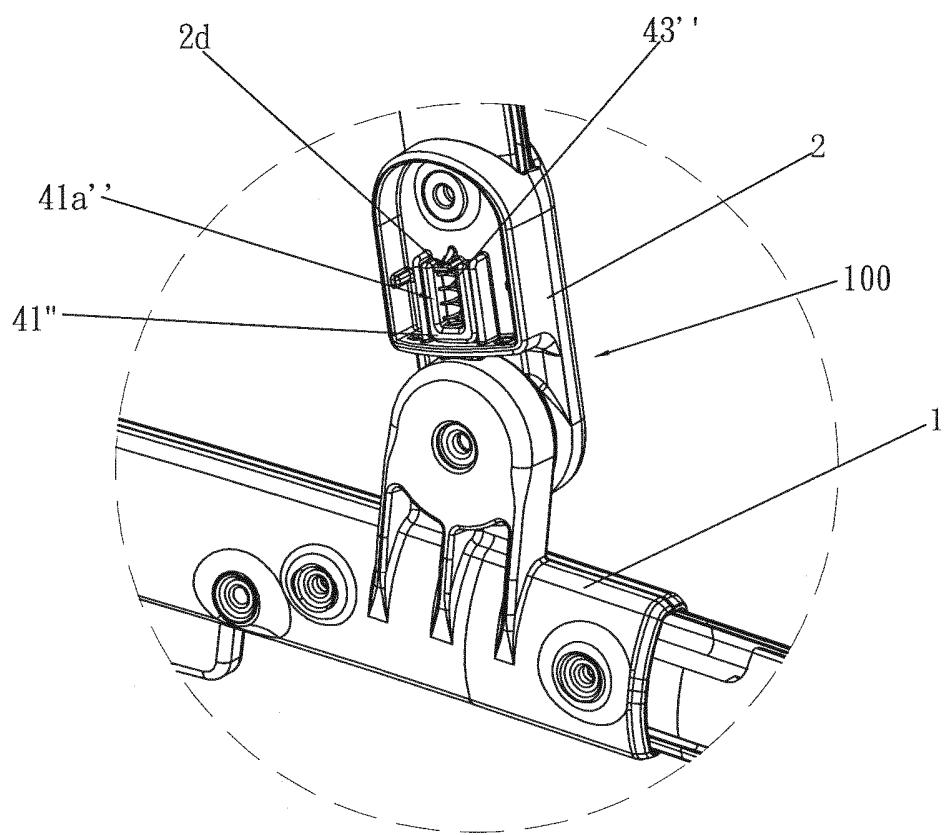
F I G. 13



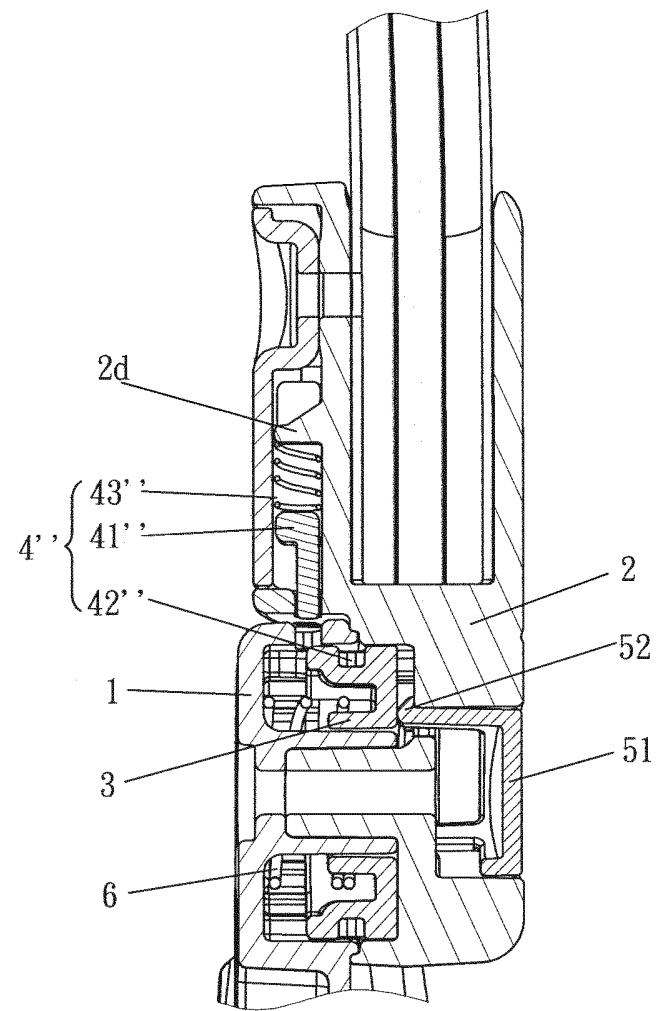
F I G. 14



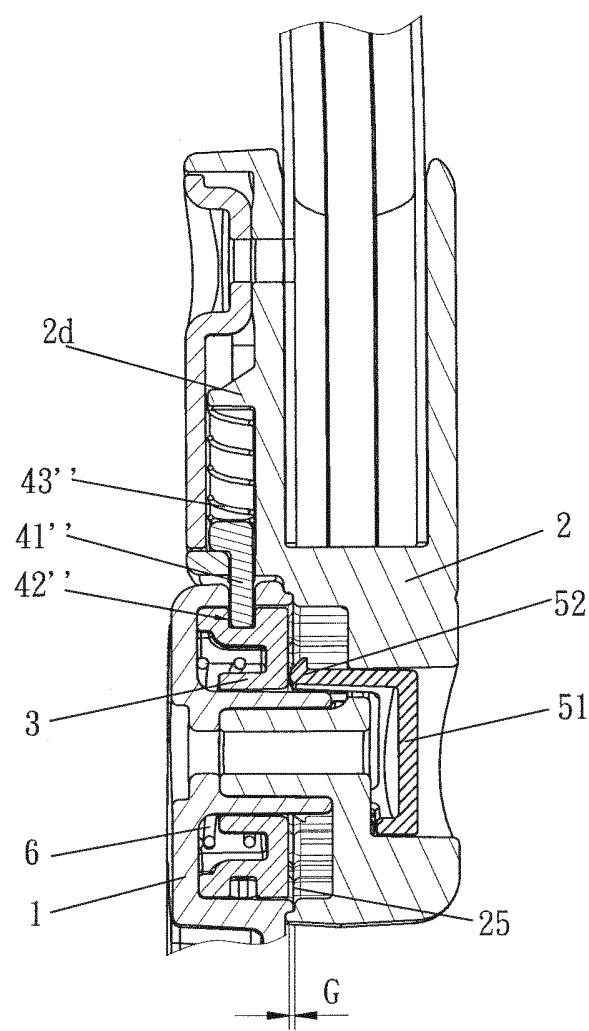
F I G. 15



F I G. 16



F I G. 17



F I G. 18