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(54) **COMBINATION STRUCTURE OF DECORATIVE CURTAIN ROD AND TRACK**

KOMBINATIONSTRUKTUR AUS DEKORATIVER VORHANGSTANGE UND SCHIENE

STRUCTURE COMBINÉE DE TRINGLE DE RIDEAU DÉCORATIVE ET DE RAIL

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Description**BACKGROUND OF THE INVENTION****Technical Field**

[0001] This disclosure relates to a curtain, and more particularly relates to a combination structure of a decorative curtain rod and a track. Such combination structures are known e.g. JP 2005 066209 A. GB1244385A shows a combination structure according to the preamble of claim 1.

Description of Related Art

[0002] A modern curtain may be combined with a decorative panel on an outer side of the curtain rod hanging a curtain fabric for aesthetic purpose to make the curtain have a unique style as a whole. Thus, the overall quality may be improved.

[0003] Moreover, the decorative panel of curtains of the related art are installed on the outside of the curtain rod by screws, or inserted in the dovetail groove on the outside of the curtain rod. However, this installation of the related art decorative panel is cumbersome and difficult, so it needs to be improved.

[0004] The installation of the curtain track of the related art is to combine multiple brackets on the wall first, and then to combine the track on these brackets. However, there are many components between the curtain track and the brackets, and that may increase the difficulty of assembly.

[0005] In view of the above drawbacks, the inventor proposes the invention disclosed herein based on his expert knowledge and elaborate researches in order to solve the problems of related art.

SUMMARY OF THE INVENTION

[0006] One object of this invention is to provide a combination structure of a decorative rod and a track to simplify the combination of a decorative rod and a track for increasing the convenience of assembly.

[0007] This object is achieved by a combination structure according to claim 1. Advantageous embodiments are the subject of the dependent claims.

[0008] In comparison with the related art, the combination structure of the decorative curtain rod and the track of this disclosure has an L-shaped opening disposed on the decorative rod. Additionally, the locking sets are arranged spacedly in the L-shaped opening. The locking plate includes a plurality of blocking pieces and is combined on the rod body through the locking pieces to be rotatable. Furthermore, the track has a pair of wings. The wings penetrate into the space of the blocking pieces of the locking plate by rotating the locking plate, and are combined in the L-shaped opening by the blocking of the blocking pieces. As a result, multiple brackets used in the

track of the related art for combination are omitted, and the convenience of assembly is increased.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The features of the invention are set forth in the appended claims. The invention itself, however, may be best understood by reference to the following detailed description of the invention, which describes a number of exemplary embodiments of the invention, taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective schematic view of the combination structure of the decorative rod and the track in this invention.

FIG. 2 is an exploded perspective schematic view of the combination structure of the decorative rod and the track in this invention.

FIG. 3 is a perspective exploded schematic view of the locking set in this invention.

FIG. 4 is a cross sectional view of the combination structure of the decorative rod and the track in this invention.

FIG. 5 is a schematic view of the locking plate of the locking set rotating to engage with the track in this invention.

FIG. 6 is a cross sectional view of the assembly of the curtain decorative rod, the track, and the curtain ring in this disclosure.

FIG. 7 is a schematic view of the curtain decorative rod hanging with a curtain fabric in this invention.

FIG. 8 is an operation schematic view of the supporting piece combing with the track through the locking sets in this invention.

FIG. 9 and FIG. 10 are cross sectional views from two sides of the supporting piece and the track in this invention.

FIG. 11 and FIG. 12 are another embodiment of the combination structure of the decorative rod and the track in this invention.

DETAILED DESCRIPTION

[0010] The technical contents of this disclosure will become apparent with the detailed description of embodiments accompanied with the illustration of related drawings as follows. It is intended that the embodiments and drawings disclosed herein are to be considered illustrative rather than restrictive.

[0011] Please refer to FIG. 1 to FIG. 3, which depict a perspective schematic view and an exploded perspective schematic view of the combination structure of the decorative rod and the track in this disclosure, and a perspective exploded schematic view of the locking set in this disclosure. This disclosure provides a combination structure of the decorative curtain rod and the track. The combination structure includes a decorative rod 10, a plurality of locking sets 20 and a track 30. The track 30 is

combined on the decorative rod 10 through the locking sets 20.

[0012] The decorative rod 10 includes a rod body 11 and an L-shaped opening 12 disposed on a side of the rod body 11. The L-shaped opening 12 is extended from one end of the rod body 11 to another end of the rod body 11. Furthermore, a plurality of decorative patterns 111 are disposed on an outer surface of the rod body 11. The arrangement of the decorative patterns 111 may enhance the aesthetics of the decorative rod 10.

[0013] In this embodiment, the decorative rod 10 further includes a pair of decorative heads 13, a pair of end plates 14 and a plurality of screws 15. The pair of end plates 14 are respectively disposed between each of the decorative heads 13 and each end of rod body 11 through the screws 15. Moreover, the pair of decorative heads 13 are combined on two ends of the rod body 11 opposite to each other. In some embodiments, each decorative head 13 is formed with a cover 131 on a side facing the rod body 11. The cover 131 is fastened on an end of the rod body 11.

[0014] The locking sets 20 are arranged spacedly on the rod body 11 at a side where the L-shaped opening 12 is located. Each of the locking sets 20 at least includes a locking plate 21 and a locking piece 22. The locking plate 21 includes a plate body 211 and a plurality of blocking pieces 212. The blocking pieces 212 are arranged in pair and spacedly on the plate body 211 to form an insertion space 210 respectively (refer to FIG. 6). Each of the locking plates 21 is combined on the rod body 11 and is rotatable through the locking piece 22.

[0015] Specifically, each of the locking plates 21 includes a handle 213. The handle 213 is disposed protrusively from the periphery of the locking plate 21 for the user to exert force to rotate the locking plate 21. Additionally, the locking plate 21 includes a stepped portion 214 located between the pair of the blocking pieces 212. The arrangement of the stepped portion 214 may enlarge the insertion space 210 for facilitating the insertion of the track 30.

[0016] In one embodiment of this disclosure, each of the locking sets 20 further includes a gasket 23. The gasket 23 is disposed between the locking plate 21 and an inner wall of the L-shaped opening 12. The arrangement of the gasket 23 may facilitate the rotation of the locking plate 21.

[0017] The track 30 includes a column 31 and a sliding slot 32 arranged on the column 31. The column 31 includes a fixing plate 311 and a pair of wings 312 bent and extended from two sides of the fixing plate 311. The pair of wings 312 and the sliding slot 32 are arranged on two sides of the fixing plate 311 opposite to each other.

[0018] Please refer to FIG. 4 to FIG. 7, which are a cross sectional view of the combination structure of the decorative curtain rod and the track in this disclosure, a schematic view of the locking plate of the locking set rotating for combining with the track in this disclosure, and a cross sectional view of the assembly of the dec-

orative rod, the track and the curtain ring in this disclosure, and a schematic view of the decorative rod hanging with a curtain fabric in this disclosure. As shown in the FIG. 4, the decorative rod 10 needs to be fixed before assembling the track 30 of this disclosure, and the locking sets 20 are arranged on a wall of the L-shaped opening 12. Additionally, when assembling the locking sets 20, the locking piece 22 is inserted to the gasket 23 and the locking plate 21 to be combined on the upper wall of the L-shaped opening 12, and then the track 30 is placed on the bottom side of the locking sets 20.

[0019] It should be noted that when the track 30 is not positioned yet, an external force is required for supporting.

[0020] As shown in FIG. 5 and FIG. 6, the handle 213 drives the locking plate 21 to rotate when being pulled by an external force. The wings 312 of the track 30 penetrate into the insertion space 210 of the locking plate 21 after the locking plate 21 rotates. Furthermore, the wings 312 of the track 30 are blocked by the blocking plates 212 to be positioned on the bottom side of the locking plate 21. Accordingly, the track 30 may be combined in the L-shaped opening 12 through the locking sets 20.

[0021] Please refer to FIG. 7, after the track 30 is combined on the decorative rod 10, a plurality of curtain rings 3 may be disposed on the track 30 for hanging a curtain fabric 2. In this embodiment, each curtain ring 3 is combined with the track 30 through a pair of pulleys 4. Specifically, the column 31 of the track 30 includes a pair of passageways 310 arranged on two sides of the sliding slot 32. The pair of pulleys 4 are arranged in the pair of passageways 310.

[0022] Please further refer to FIG. 8 to FIG. 10, which are an operation schematic view of the supporting piece combing with the track through the locking sets in this disclosure and two cross sectional views from two sides of the supporting piece and the track in this disclosure. The combination structure of the decorative curtain rod and the track in this disclosure further includes a plurality of supporting pieces 40 and a plurality of brackets 50. Each supporting piece 40 is arranged between the inner wall of the L-shaped opening 12 and the track 30 for adjusting the position of the track 30 in the L-shaped opening 12. Accordingly, one end of each bracket 50 may be combined with the track 30 through the locking sets 20 to be fixed in the L-shaped opening 12. Therefore, another end of each bracket 50 is fixed on a wall 6 through a plurality of screws 5 to support the decorative rod 10 and the track 30.

[0023] Please further refer to FIG. 9 and FIG. 10. One end of the bracket 50 of this disclosure is combined with the track 30 through the locking sets 20 to be fixed between the inner wall of the L-shaped opening 12 and the track 30. Furthermore, the assembly of the locking set 20 is described as above and here is omitted for brevity.

[0024] It should be noted that the track 30 of this disclosure is combined on the decorative rod 10 through the locking sets 20. Additionally, the brackets 50 are also

combined with the track 30 through the locking sets 20. Therefore, when assembling the track 30 and the brackets 50, the locking sets 20 may be shared. As a result, the convenience of assembling is increased and the purpose of simplifying the assembling is achieved.

[0025] Please further refer to FIG. 11 and FIG. 12, which are another embodiment of the combination structure of the decorative rod and the track in this disclosure. The combination structure includes a decorative rod 10a, a plurality of locking sets 20a, a track 30a, a plurality of supporting pieces 40a and a plurality of brackets 50a. The decorative rod 10a includes a rod body 11a and an L-shaped opening 12a disposed on a side of the rod body 11a. The locking sets 20a are arranged spacedly on the rod body 11a at a side where the L-shaped opening 12a is located. Each of the locking sets 20a includes a locking plate 21a, a locking piece 22a and a gasket 23a. The track 30a is combined on the decorative rod 10a through the locking sets 20a. Each supporting piece 40a is arranged between the inner wall of the L-shaped opening 12a and the track 30a for adjusting the position of the track 30a in the L-shaped opening 12a.

[0026] Comparing with the previous embodiment, this embodiment is different in that the rod body 11a is a hollow metal rod. Moreover, the rod body 11a is further combined with a decoration plate 60a on the side facing the L-shaped opening 12a. The outer surface of the decoration plate 60a is connected to the bottom side of the rod body 11a for covering the bottom side of the rod body 11a. Additionally, the arrangement of the locking sets 20a and the other components is the same as that of the previous embodiment and here is omitted for brevity.

Claims

1. A combination structure, comprising:

a locking set (20) comprising a locking plate (21) and a locking piece (22), the locking plate (21) comprising a plate body (211) and a plurality of blocking pieces (212), wherein the plurality of blocking pieces (212) are arranged in pair and spacedly on the plate body (211), an insertion space (210) is defined on the locking plate (21), and the locking plate (21) is rotatable; and a track (30), comprising a column (31) and a sliding slot (32) disposed on the column (31), the column (31) comprising a fixing plate (311) and a pair of wings (312) bent and extended from two sides of the fixing plate (311), wherein the pair of wings (312) and the sliding slot (32) are arranged on two sides of the fixing plate (311) opposite to each other; wherein, the track (30) is combined through the locking plate (21) being configured to rotate to make the pair of wings (312) penetrate into the insertion space (210) and be blocked by the

blocking pieces (212);

characterized in that said combination structure further comprises:

a decorative rod (10), comprising a rod body (11) and an L-shaped opening (12) disposed on a side of the rod body (11), the L-shaped opening (12) extended from one end of the rod body (11) to another end of the rod body (11); a plurality of said locking sets (20), arranged spacedly in the L-shaped opening (12); wherein the track is further combined in the L-shaped opening (12); wherein the decorative rod (10) further comprises a pair of decorative heads (13), and the pair of decorative heads (13) are combined on two ends of the rod body (11); and wherein the decorative rod (10) further comprises a pair of end plates (14) and a plurality of screws (15), and the pair of end plates (14) are respectively arranged between each of the decorative heads (13) and each end of the rod body (11) through the screws (15).

2. The combination structure according to claim 1, wherein a cover (131) is disposed on a side of each of the decorative heads (13) facing the rod body (11), and the cover (131) is fastened on one end of the rod body (11).
3. The combination structure according to claim 1, wherein a plurality of decorative patterns (111) is disposed on an outer surface of the rod body (11).
4. The combination structure according to claim 1, wherein each of the locking sets (20) further comprises a gasket (23), and the gasket (23) is arranged between the locking plate (21) and an inner wall of the L-shaped opening (12).
5. The combination structure according to claim 1, wherein the locking plate (21) comprises a handle (213), and the handle (213) is disposed protrusively on a periphery of the locking plate (21).
6. The combination structure according to claim 1, wherein the locking plate (21) comprises a stepped portion (214) located between a pair of the blocking pieces (212).
7. The combination structure according to claim 1, wherein the column (31) comprises a pair of passageways (310) arranged on two sides of the sliding slot (32), and a pair of pulleys (4) are arranged in the pair of passageways (310), and the pair of pulleys (4) is combined with a curtain ring.

8. The combination structure according to claim 1, further comprising a plurality of supporting pieces (40), wherein each of the supporting pieces (40) is combined on the decorative rod (10) through each locking sets (20).

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von Schrauben (15) umfasst, und das Paar Endplatten (14) jeweils zwischen jedem der dekorativen Köpfe (13) und jedem Ende des Stabkörpers (11) durch die Schrauben (15) angeordnet ist.

Patentansprüche

1. Kombinationsstruktur, umfassend:

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einen Verriegelungssatz (20), der eine Verriegelungsplatte (21) und ein Verriegelungsteil (22) umfasst, wobei die Verriegelungsplatte (21) einen Plattenkörper (211) und eine Vielzahl von Blockierstücken (212) umfasst, wobei die Vielzahl von Blockierstücken (212) paarweise und beabstandet auf dem Plattenkörper (211) angeordnet sind, ein Einführungsraum (210) auf der Verriegelungsplatte (21) definiert ist und die Verriegelungsplatte (21) drehbar ist; und eine Schiene (30), die eine Säule (31) und einen Gleitschlitz (32) umfasst, der an der Säule (31) angeordnet ist, wobei die Säule (31) eine Befestigungsplatte (311) und ein Paar von Flügeln (312) umfasst, die gebogen sind und sich von zwei Seiten der Befestigungsplatte (311) erstrecken, wobei das Paar von Flügeln (312) und der Gleitschlitz (32) auf zwei Seiten der Befestigungsplatte (311) einander gegenüberliegend angeordnet sind; wobei die Schiene (30) durch die Verriegelungsplatte (21) kombiniert wird, die so konfiguriert ist, dass sie sich dreht, damit das Flügelpaar (312) in den Einführungsraum (210) eindringt und durch die Blockierstücke (212) blockiert wird; **dadurch gekennzeichnet, dass** die Kombinationsstruktur weiterhin umfasst:

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einen dekorativen Stab (10), der einen Stabkörper (11) und eine L-förmige Öffnung (12) aufweist, die an einer Seite des Stabkörpers (11) angeordnet ist, wobei sich die L-förmige Öffnung (12) von einem Ende des Stabkörpers (11) zu einem anderen Ende des Stabkörpers (11) erstreckt; eine Vielzahl von Verriegelungssätzen (20), die in der L-förmigen Öffnung (12) beabstandet angeordnet sind; wobei die Schiene weiterhin in der L-förmigen Öffnung (12) zusammengefasst ist; wobei die dekorative Stange (10) ferner ein Paar dekorativer Köpfe (13) umfasst, und das Paar dekorativer Köpfe (13) an zwei Enden des Stangenkörpers (11) kombiniert ist; und wobei der dekorative Stab (10) ferner ein Paar Endplatten (14) und eine Vielzahl

2. Kombinationsstruktur nach Anspruch 1, wobei eine Abdeckung (131) auf einer dem Stabkörper (11) zugewandten Seite jedes der Zierköpfe (13) angeordnet ist und die Abdeckung (131) an einem Ende des Stabkörpers (11) befestigt ist.

3. Kombinationsstruktur nach Anspruch 1, wobei eine Vielzahl von dekorativen Mustern (111) auf einer Außenfläche des Stabkörpers (11) angeordnet ist.

4. Kombinationsstruktur nach Anspruch 1, wobei jeder der Verriegelungssätze (20) ferner eine Dichtung (23) umfasst und die Dichtung (23) zwischen der Verriegelungsplatte (21) und einer Innenwand der L-förmigen Öffnung (12) angeordnet ist.

5. Kombinationsstruktur nach Anspruch 1, wobei die Verriegelungsplatte (21) einen Griff (213) umfasst und der Griff (213) vorstehend an einem Umfang der Verriegelungsplatte (21) angeordnet ist.

6. Kombinationsstruktur nach Anspruch 1, wobei die Verriegelungsplatte (21) einen abgestuften Abschnitt (214) umfasst, der sich zwischen einem Paar der Blockierstücke (212) befindet.

7. Kombinationsstruktur nach Anspruch 1, wobei die Säule (31) ein Paar von Durchgängen (310) umfasst, die auf zwei Seiten des Gleitschlitzes (32) angeordnet sind, und ein Paar von Riemenscheiben (4) in dem Paar von Durchgängen (310) angeordnet ist, und das Paar von Riemenscheiben (4) mit einem Vorhangring kombiniert ist.

8. Kombinationsstruktur nach Anspruch 1, die ferner eine Vielzahl von Stützteilen (40) umfasst, wobei jedes der Stützteile (40) über jeden Verriegelungssatz (20) mit dem dekorativen Stab (10) verbunden ist.

Revendications

1. Une structure combinée, comprenant:

un ensemble de verrouillage (20) comprenant une plaque de verrouillage (21) et une partie de verrouillage (22), la plaque de verrouillage (21) comprenant un corps de plaque (211) et une pluralité de pièces de blocage (212), la pluralité de pièces de blocage (212) étant agencées par paires et espacées sur le corps de plaque (211),

un espace d'insertion (210) étant défini sur la plaque de verrouillage (21), et la plaque de verrouillage (21) pouvant tourner ; et un rail (30) comprenant une colonne (31) et une fente de coulissement (32) disposée sur la colonne (31), la colonne (31) comprenant une plaque de fixation (311) et une paire d'ailes (312) qui sont courbées et s'étendent à partir de deux côtés de la plaque de fixation (311), la paire d'ailes (312) et la fente de coulissement (32) étant disposées sur deux côtés opposés de la plaque de fixation (311) ; dans lequel le rail (30) est combiné par la plaque de verrouillage (21) qui est configurée pour tourner afin de permettre à la paire d'ailes (312) de pénétrer dans l'espace d'insertion (210) et d'être bloquée par les pièces de blocage (212) ;

caractérisé en ce que la structure de combinaison comprend en outre

une tige décorative (10) comprenant un corps de tige (11) et une ouverture en forme de L (12) disposée sur un côté du corps de tige (11), l'ouverture en forme de L (12) s'étendant d'une extrémité du corps de tige (11) à une autre extrémité du corps de tige (11) ;

une pluralité d'ensembles de verrouillage (20) espacés dans l'ouverture en forme de L (12) ; le rail étant en outre réuni dans l'ouverture en forme de L (12) ;

dans lequel la tige décorative (10) comprend en outre une paire de têtes décoratives (13), et la paire de têtes décoratives (13) est combinée à deux extrémités du corps de tige (11) ;

et dans lequel la barre décorative (10) comprend en outre une paire de plaques d'extrémité (14) et une pluralité de vis (15), et la paire de plaques d'extrémité (14) est respectivement disposée entre chacune des têtes décoratives (13) et chaque extrémité du corps de barre (11) par les vis (15).

2. La structure combinée selon la revendication 1, dans laquelle un couvercle (131) est disposé sur un côté de chacune des têtes décoratives (13) faisant face au corps de la tige (11), et le couvercle (131) est fixé à une extrémité du corps de la tige (11).

3. La structure combinée selon la revendication 1, dans laquelle une pluralité de motifs décoratifs (111) sont disposés sur une surface extérieure du corps de barre (11).

4. La structure combinée selon la revendication 1, dans laquelle chacun des ensembles de verrouillage (20) comprend en outre un joint d'étanchéité (23), le joint d'étanchéité (23) étant disposé entre la plaque de verrouillage (21) et une paroi intérieure de l'ouver-

ture en forme de L (12).

5. La structure combinée selon la revendication 1, dans laquelle la plaque de verrouillage (21) comprend une poignée (213) et la poignée (213) est disposée en saillie sur une périphérie de la plaque de verrouillage (21).

6. La structure combinée selon la revendication 1, dans laquelle la plaque de verrouillage (21) comprend une partie étagée (214) qui est située entre une paire des pièces de blocage (212).

7. La structure combinée selon la revendication 1, dans laquelle la colonne (31) comprend une paire de passages (310) disposés sur deux côtés de la fente de coulissement (32), et une paire de poulies (4) est disposée dans la paire de passages (310), et la paire de poulies (4) est combinée avec un anneau à rideau.

8. La structure combinée selon la revendication 1, qui comprend en outre une pluralité de pièces de support (40), chacune des pièces de support (40) étant reliée à la barre décorative (10) par l'intermédiaire de chaque ensemble de verrouillage (20).

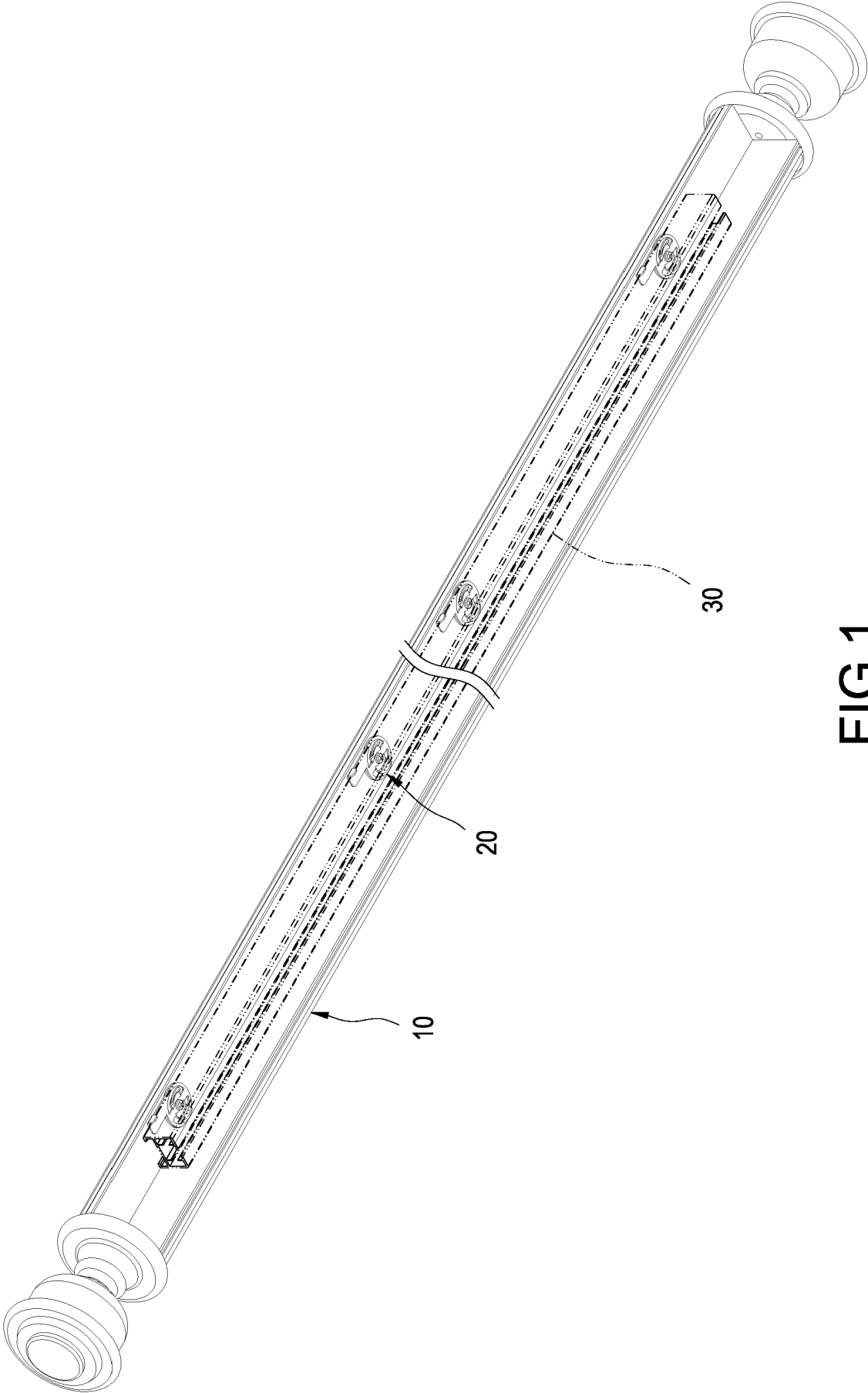


FIG.1

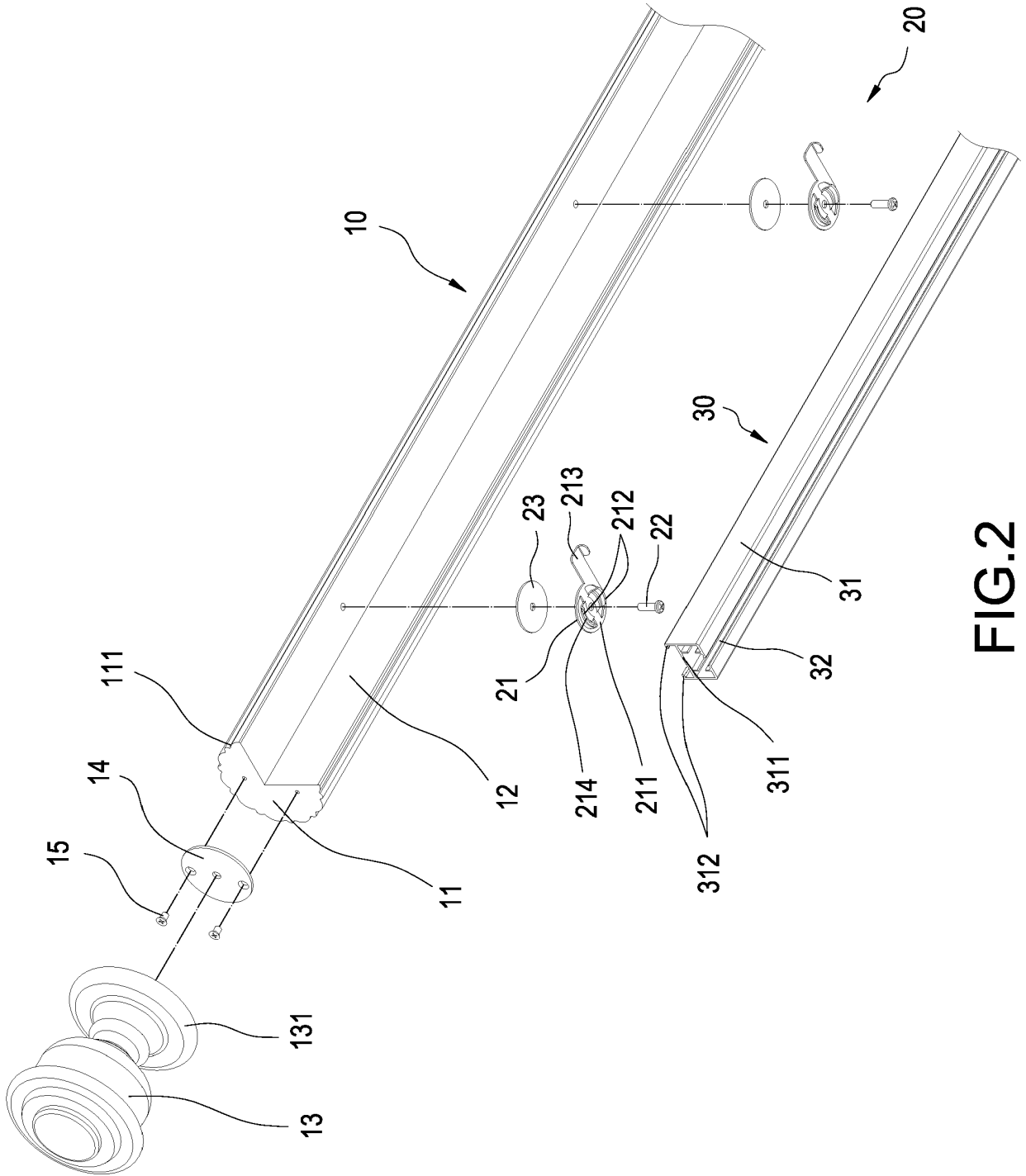


FIG.2

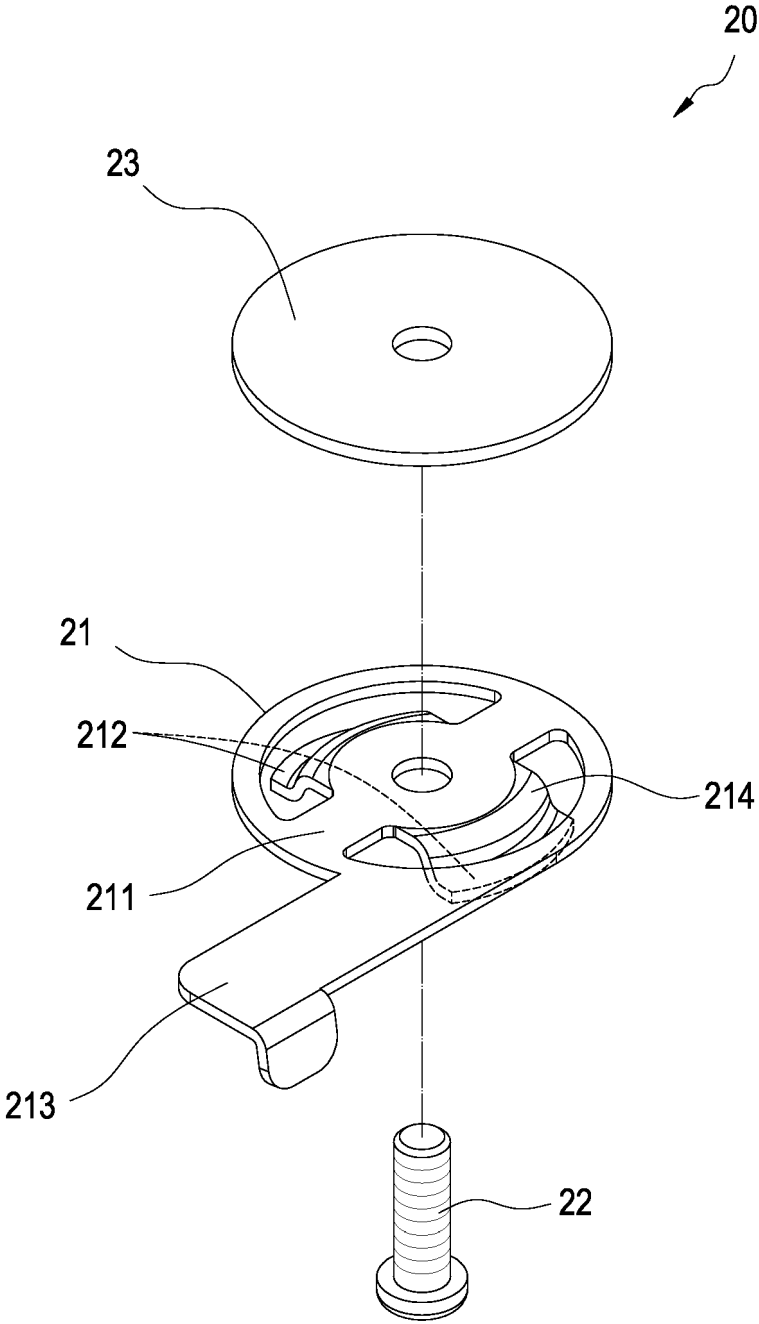


FIG.3

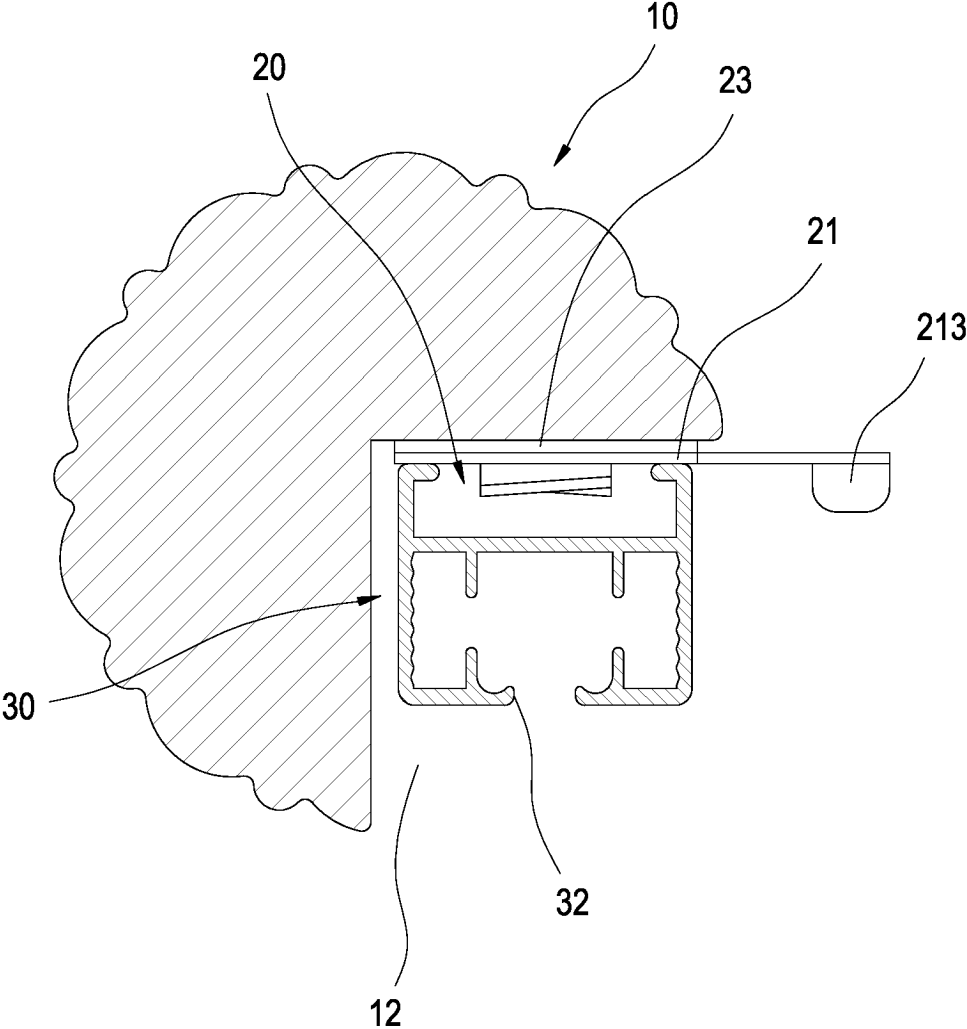


FIG.4

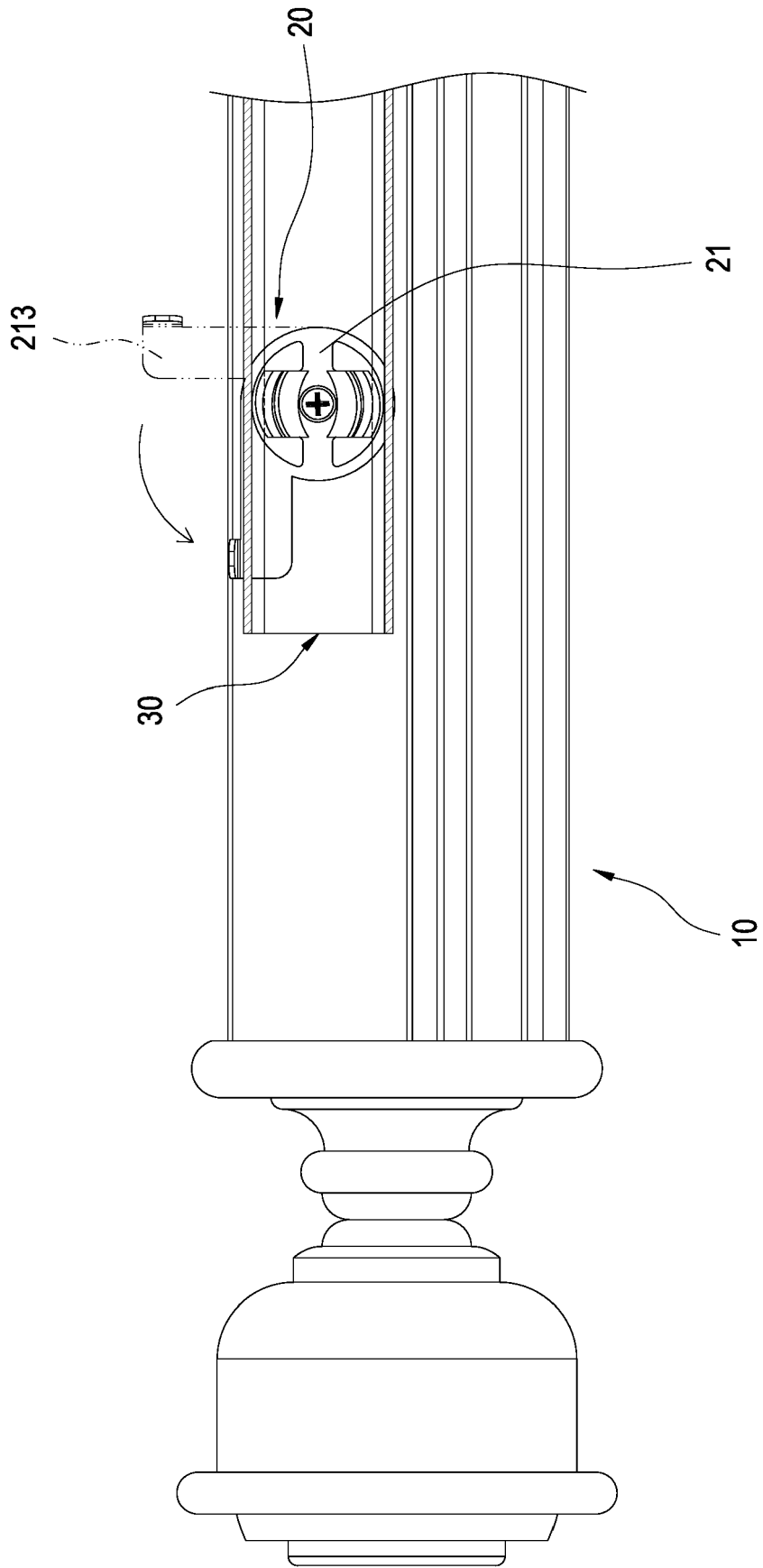


FIG.5

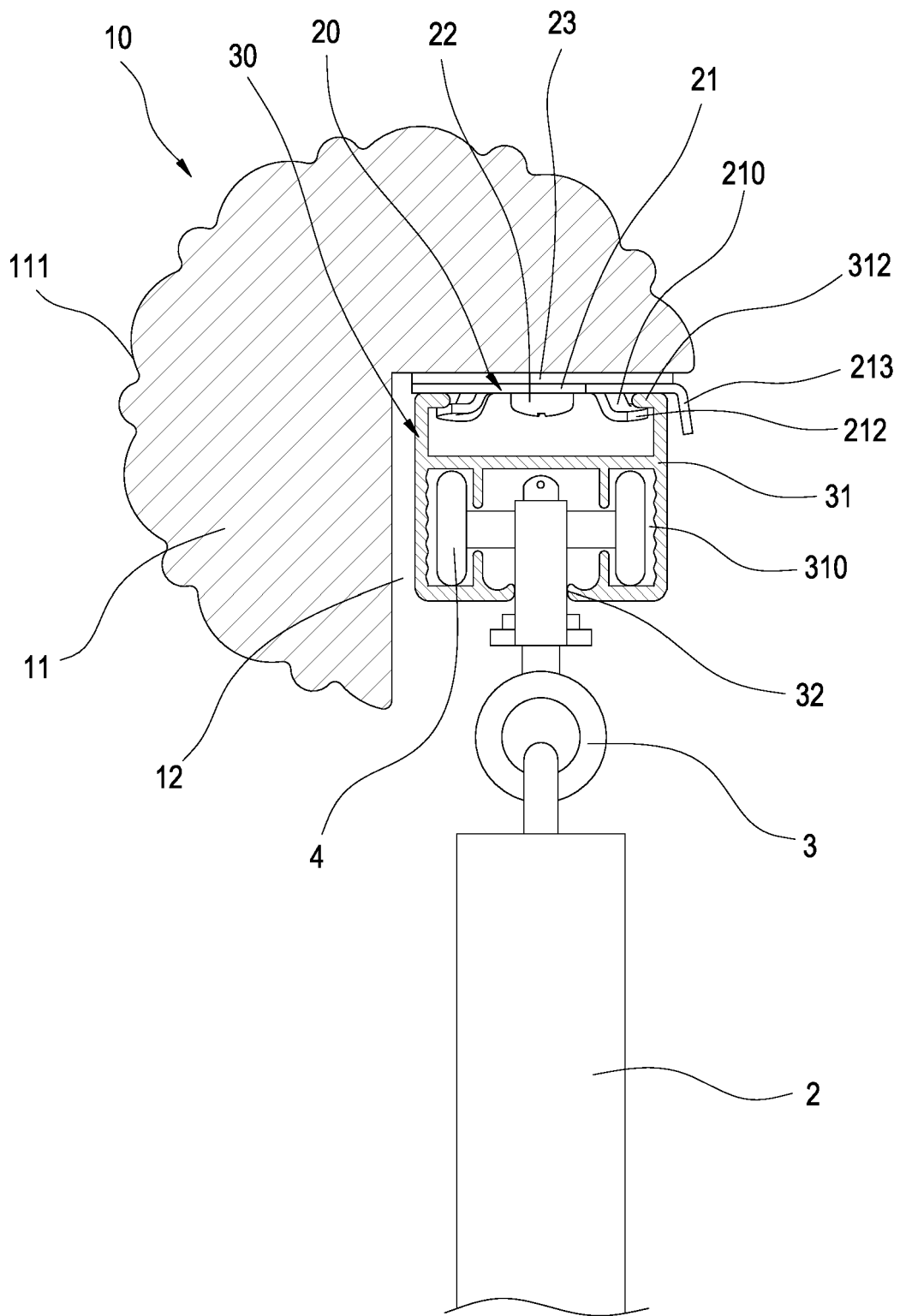


FIG.6

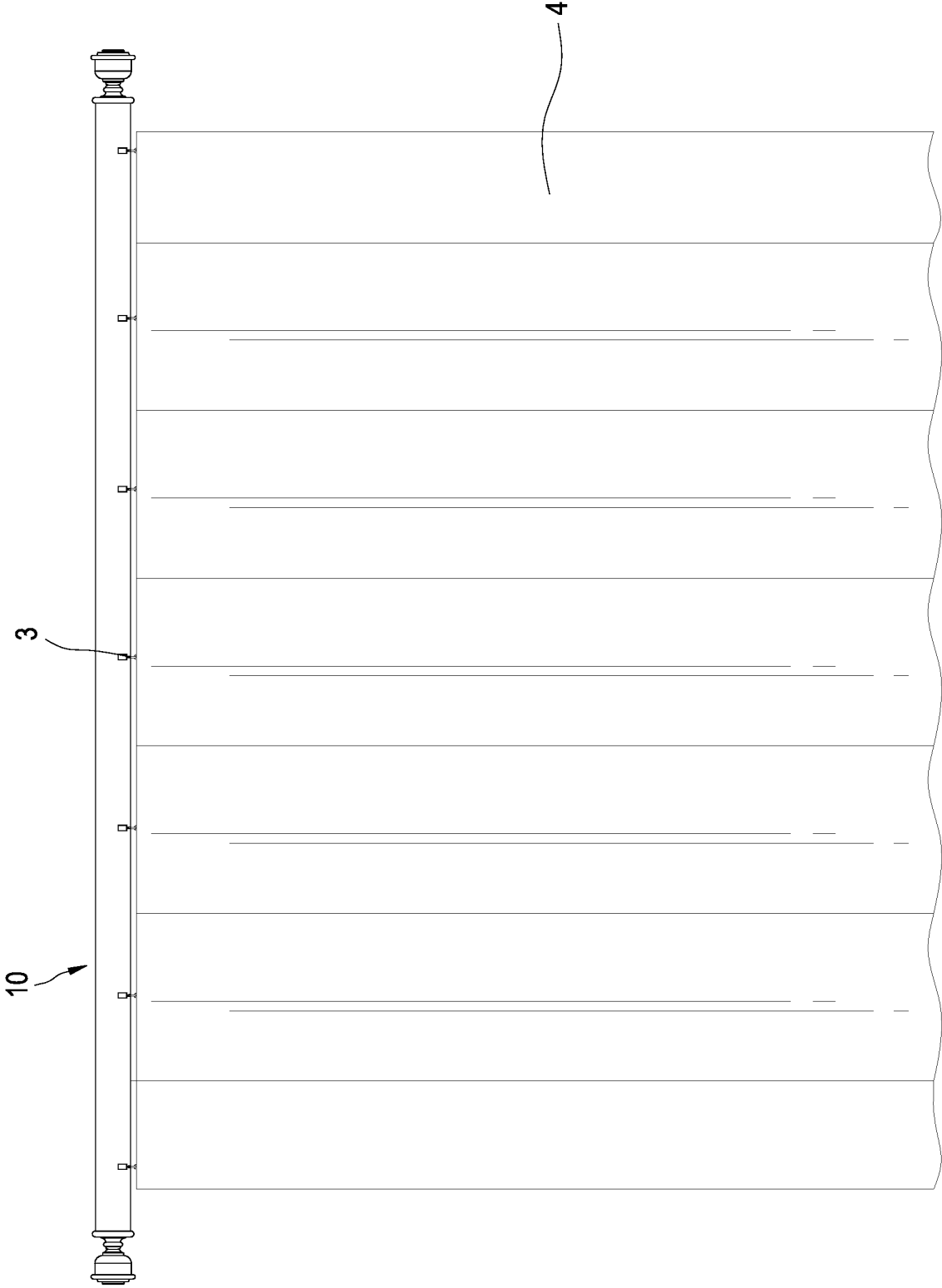


FIG.7

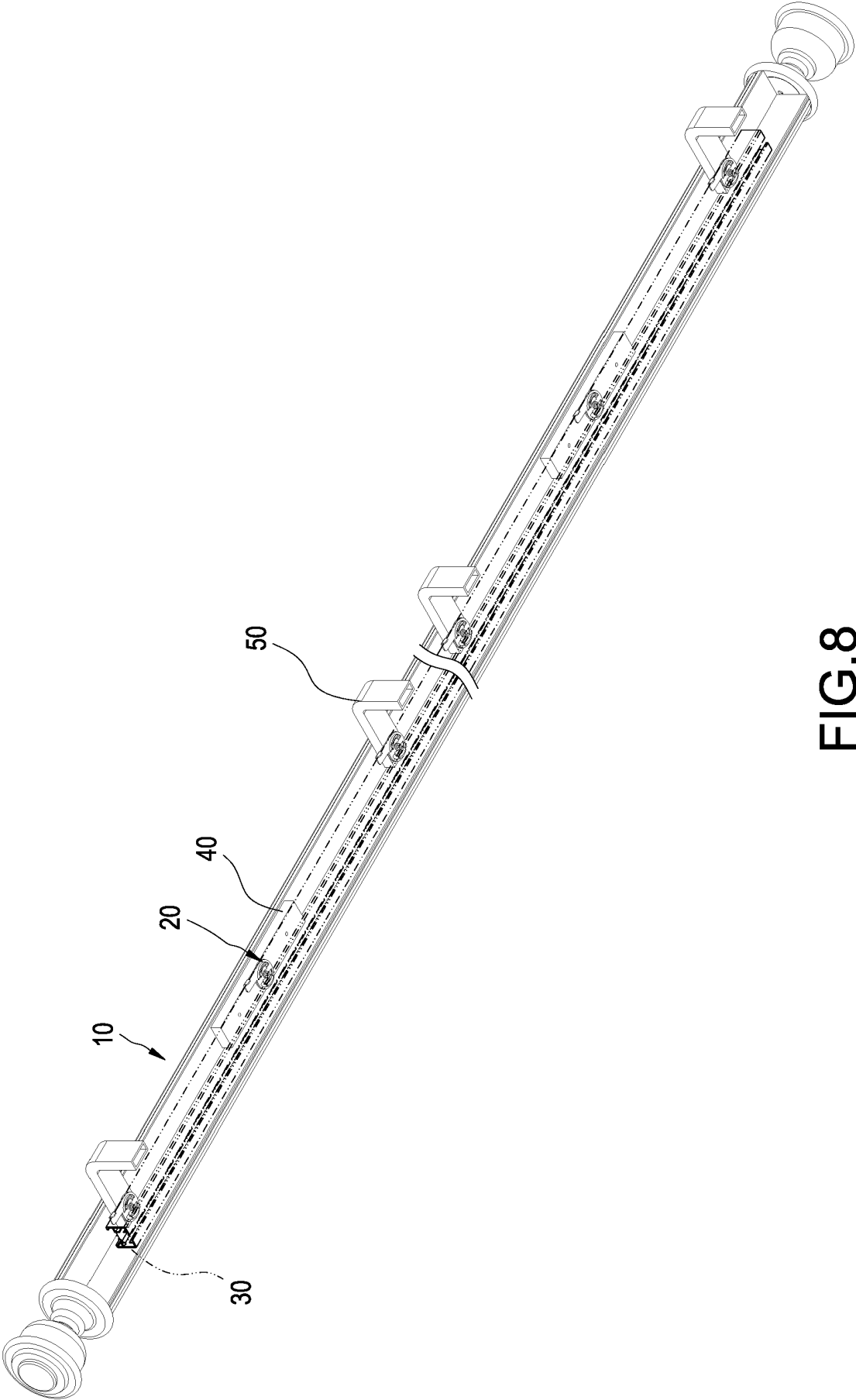


FIG.8

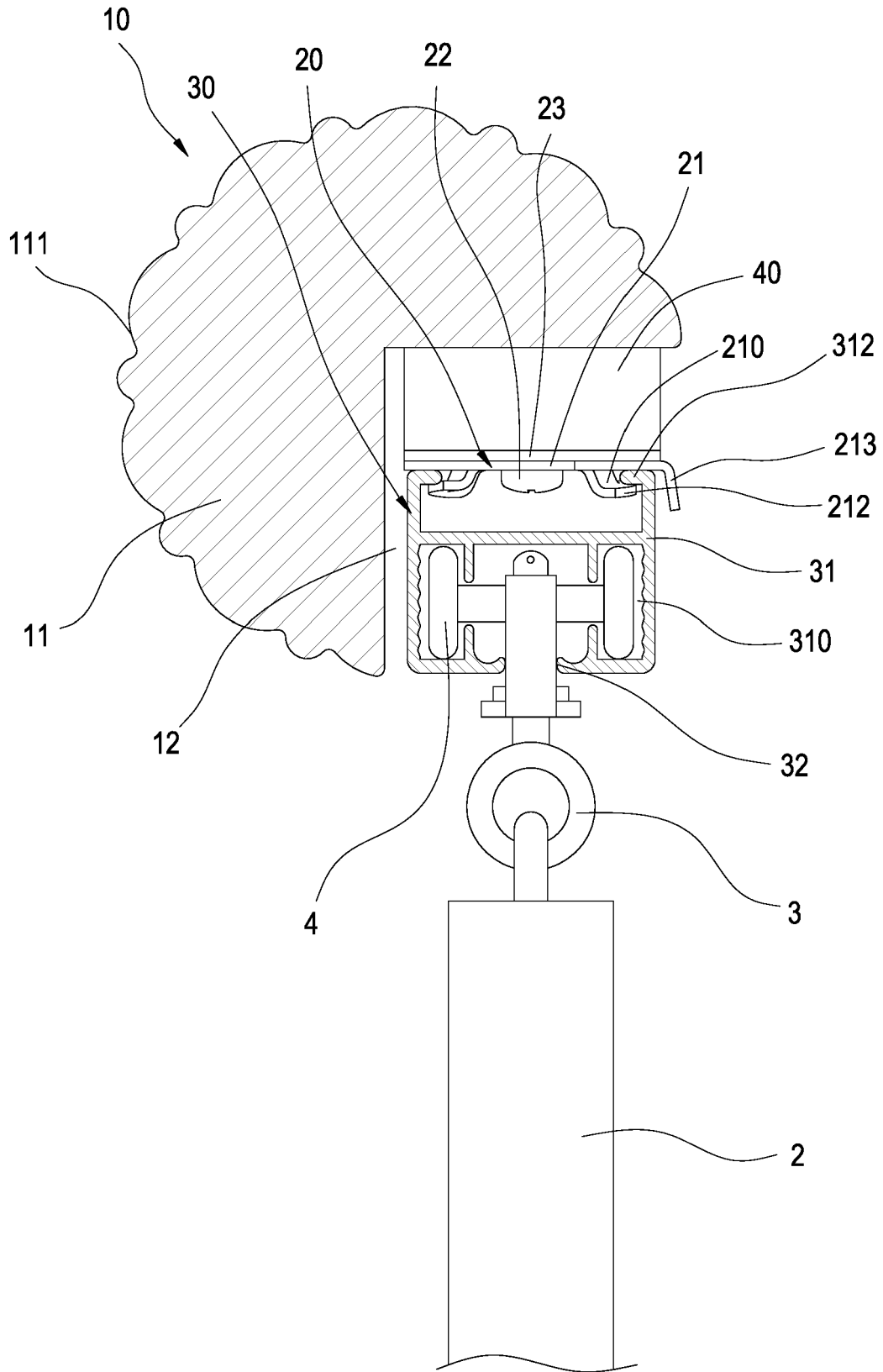


FIG.9

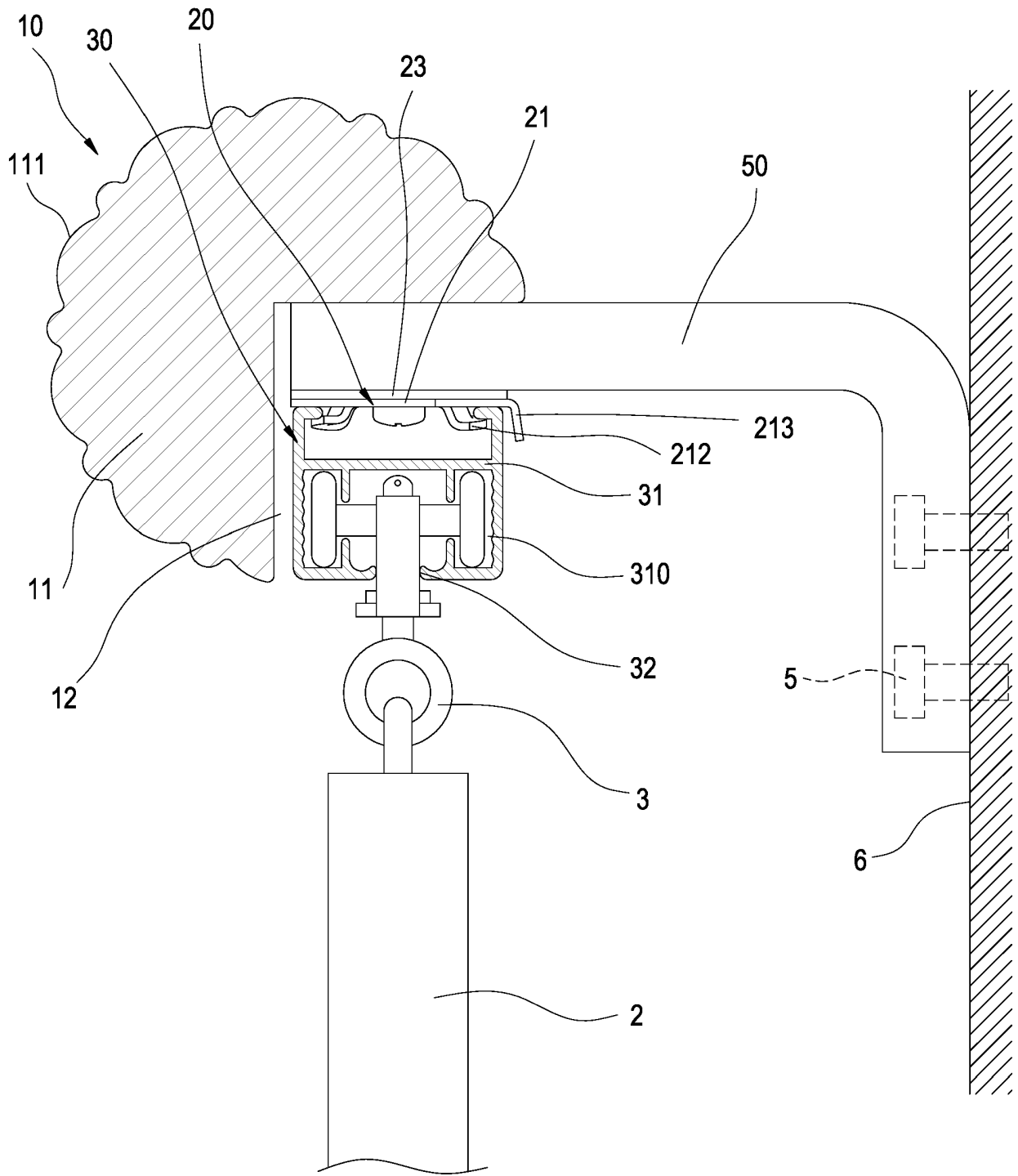


FIG.10

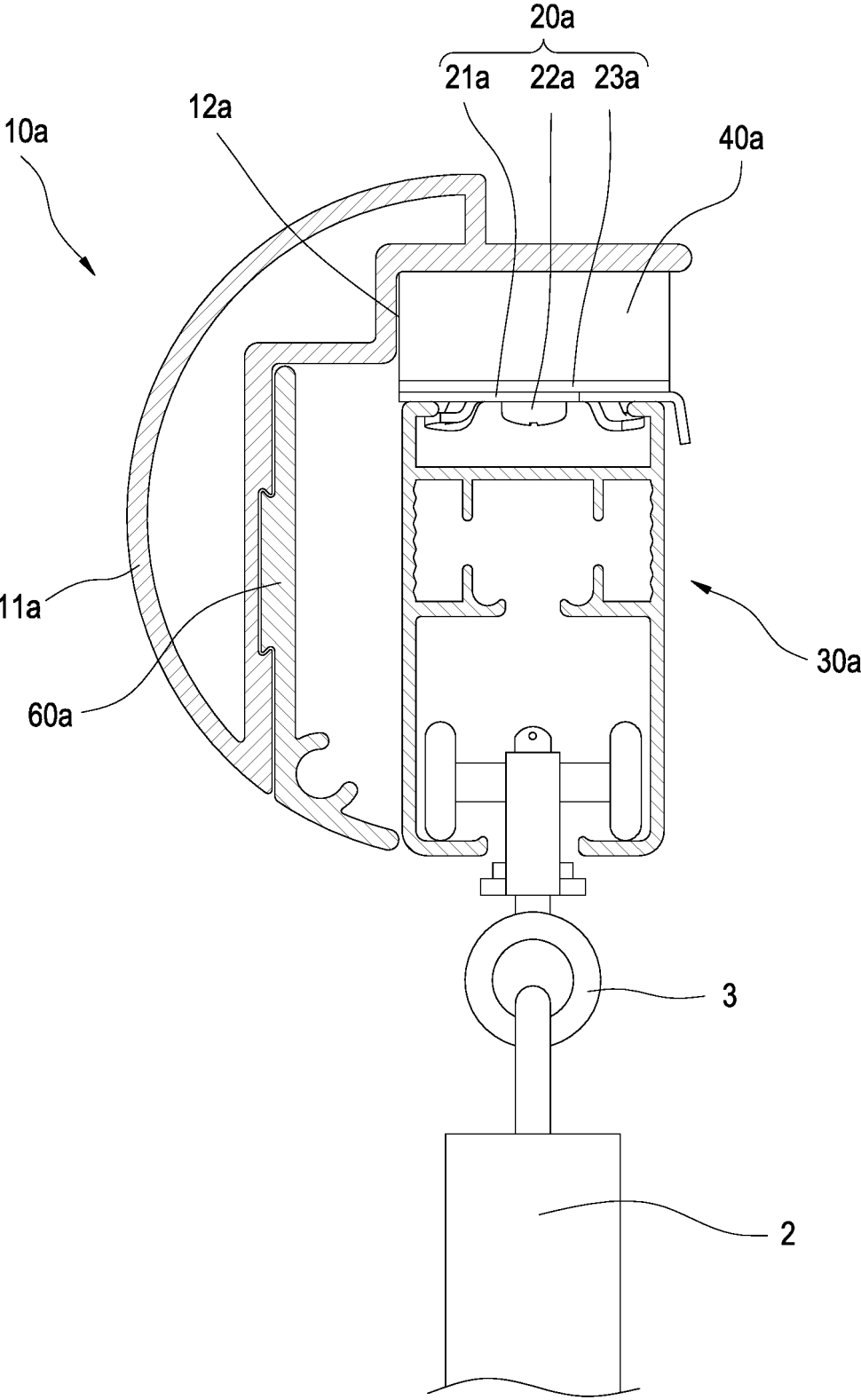


FIG.11

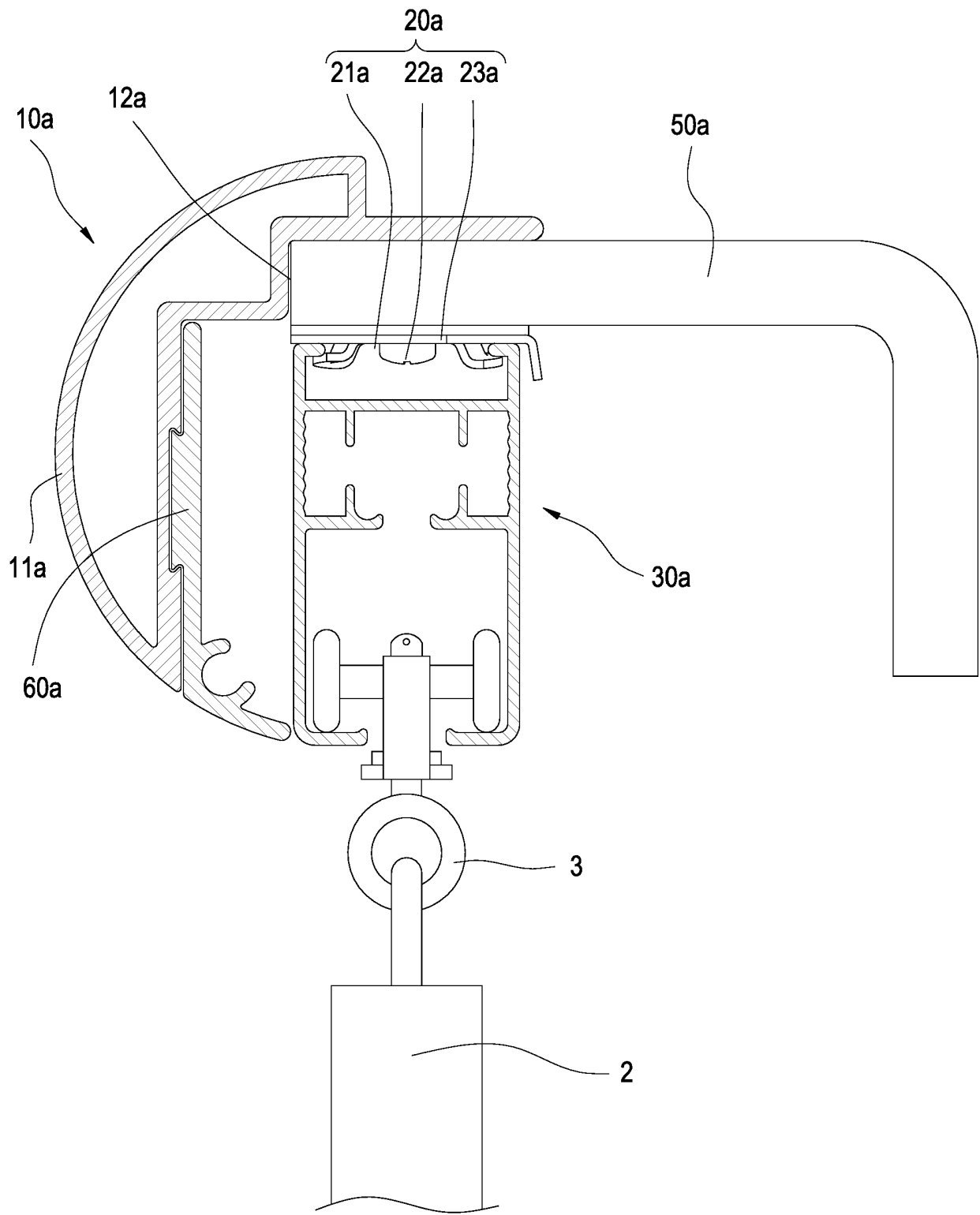


FIG.12

REFERENCES CITED IN THE DESCRIPTION

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