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(54) **RETRACTABLE LEG REST FOR CHAIR**

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(52) **U.S. Cl.**
CPC ***A47C 7/506*** (2013.01)

(58) **Field of Classification Search**
CPC A47C 7/506
USPC 297/452.28, 423.28
See application file for complete search history.

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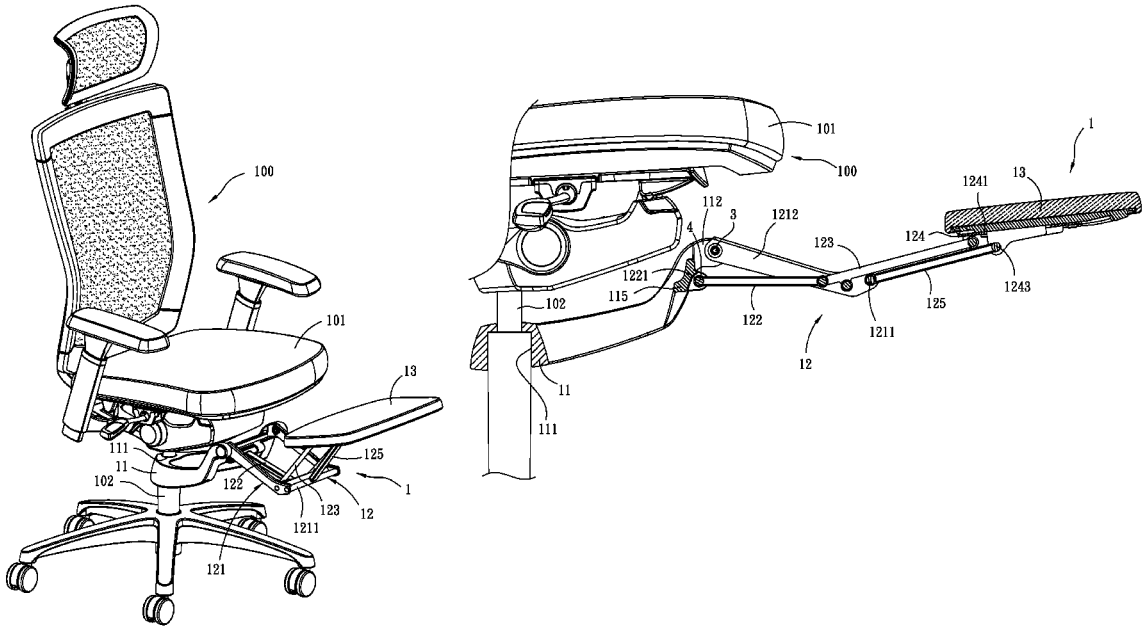
Primary Examiner — Rodney B White

(57) **ABSTRACT**

The leg rest includes a base frame and a retractable frame assembly. The base frame has a through hole and two connecting sockets. A connecting rod connects between the connecting sockets. Two hole seats are provided on the connecting rod. The retractable frame assembly connects with the base frame and includes a first support frame having two connecting arms and a main board connected therebetween. The connecting arms separately connect the connecting sockets. A link with a connecting tube perpendicularly extends from the main board. The connecting tube is coaxially connected between the hole seats. A second support frame rotatably connects to the main board. A support seat rotatably connects to the second support frame and has a transversal rod. A vertical rod is perpendicularly connected between the transversal rod and the main board. A support pad is fixed onto the support seat.

9 Claims, 6 Drawing Sheets



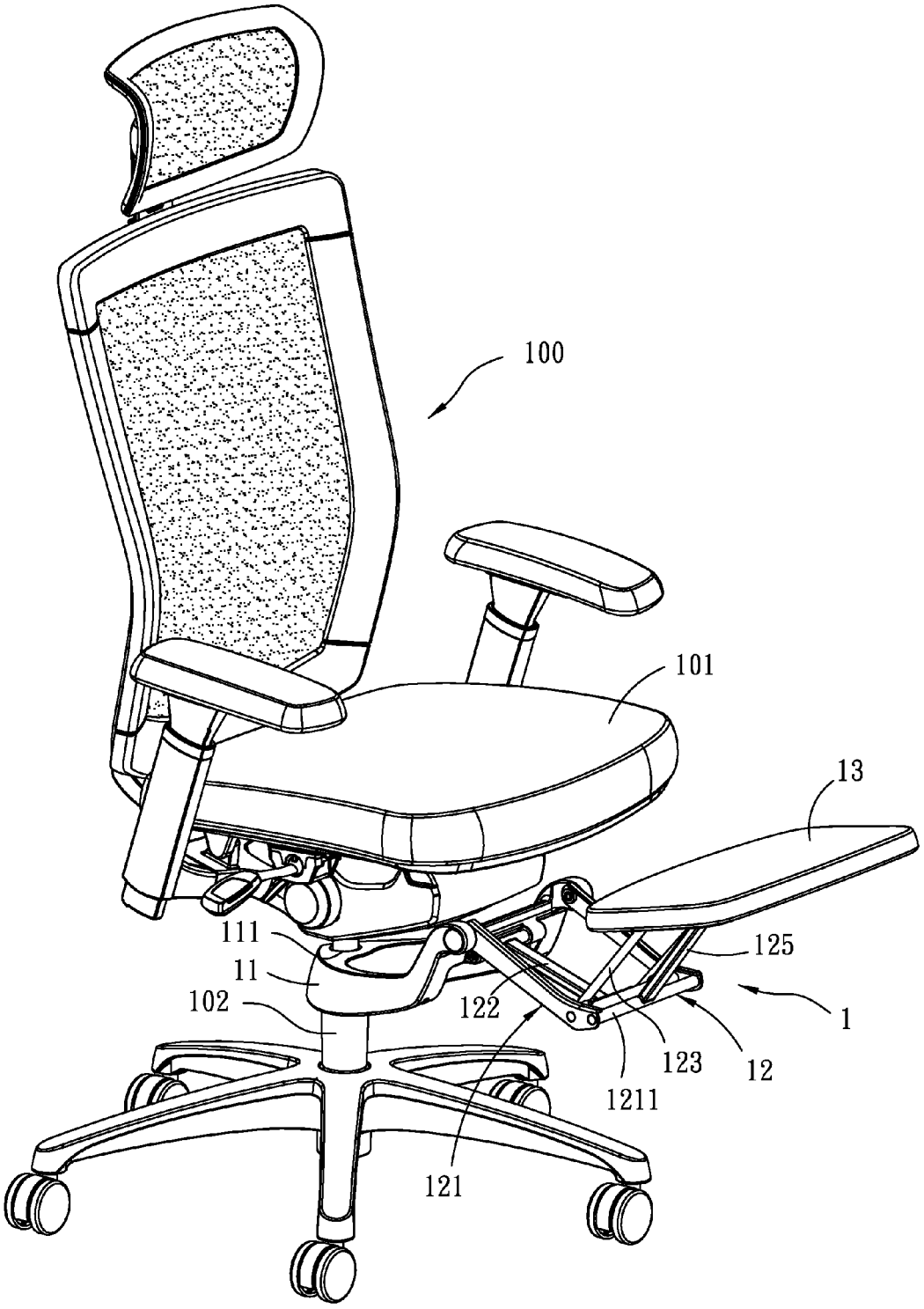


FIG 1

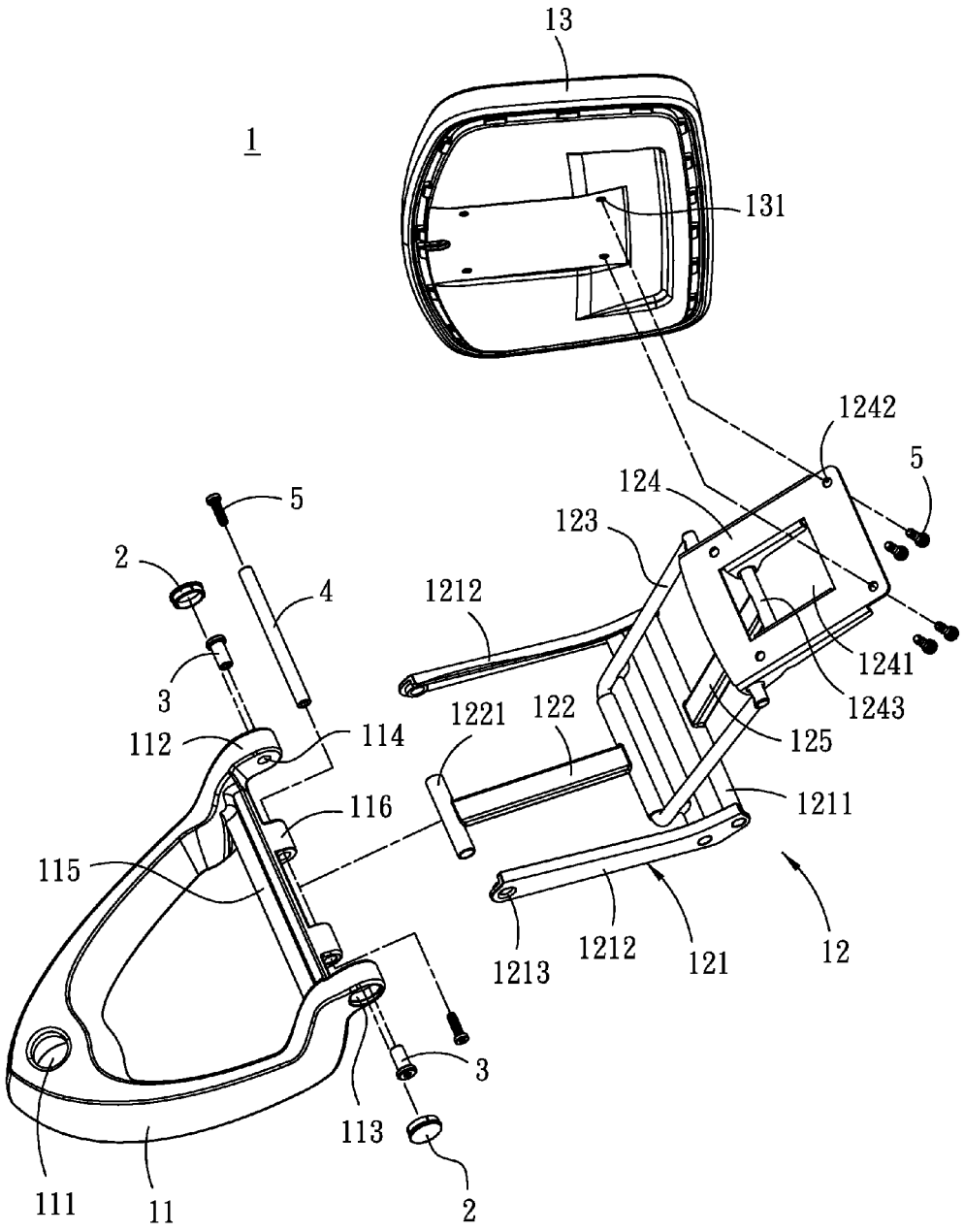

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FIG 2

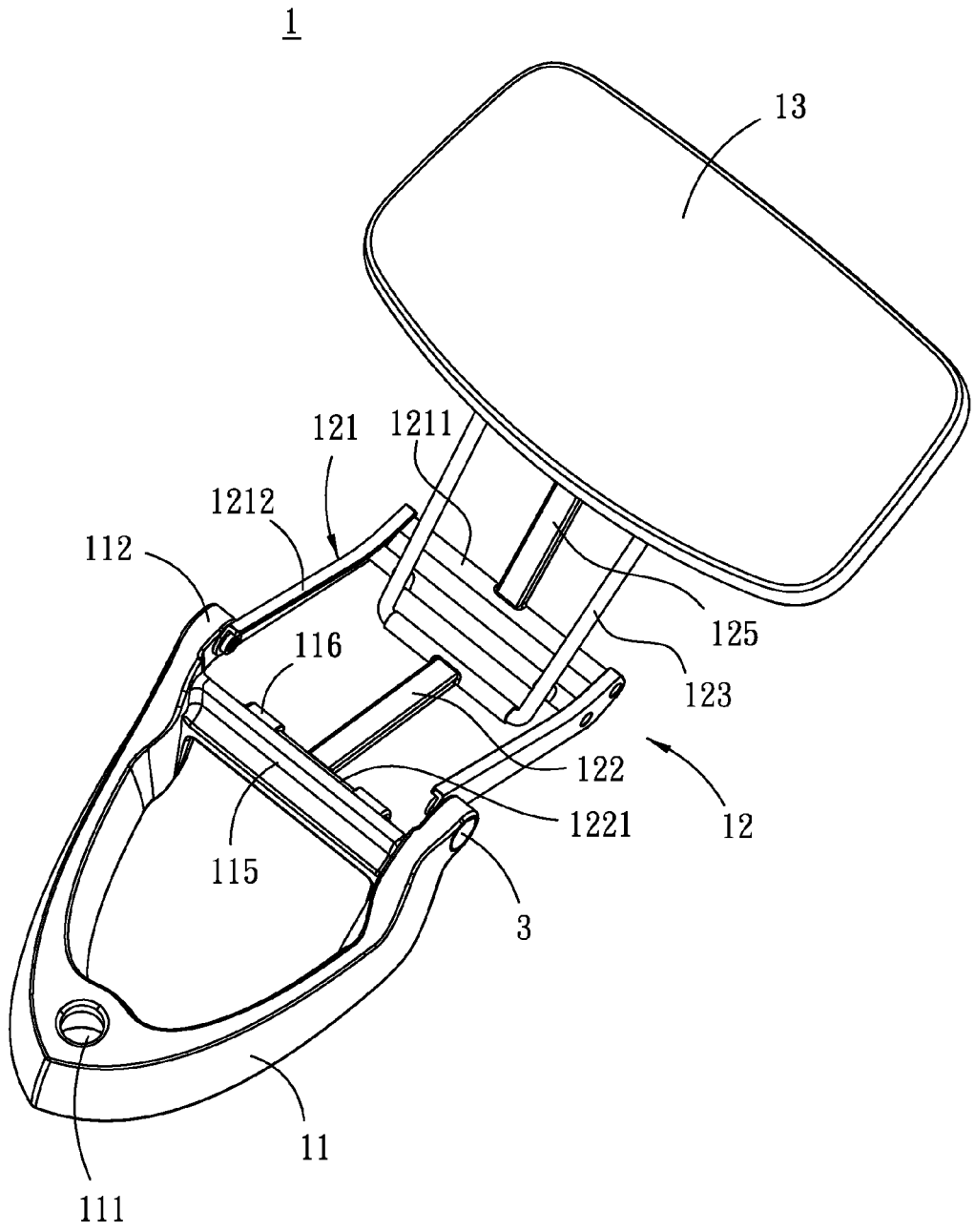

FIG 3

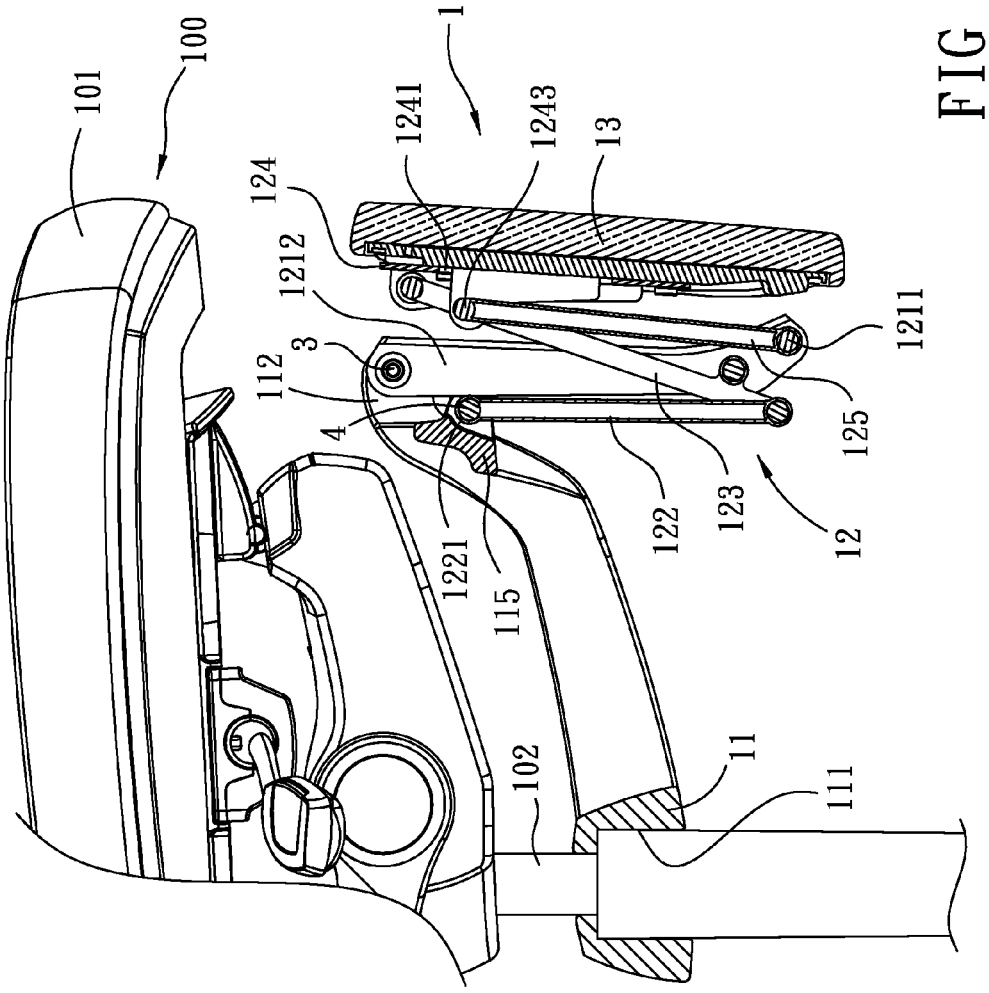
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FIG 4

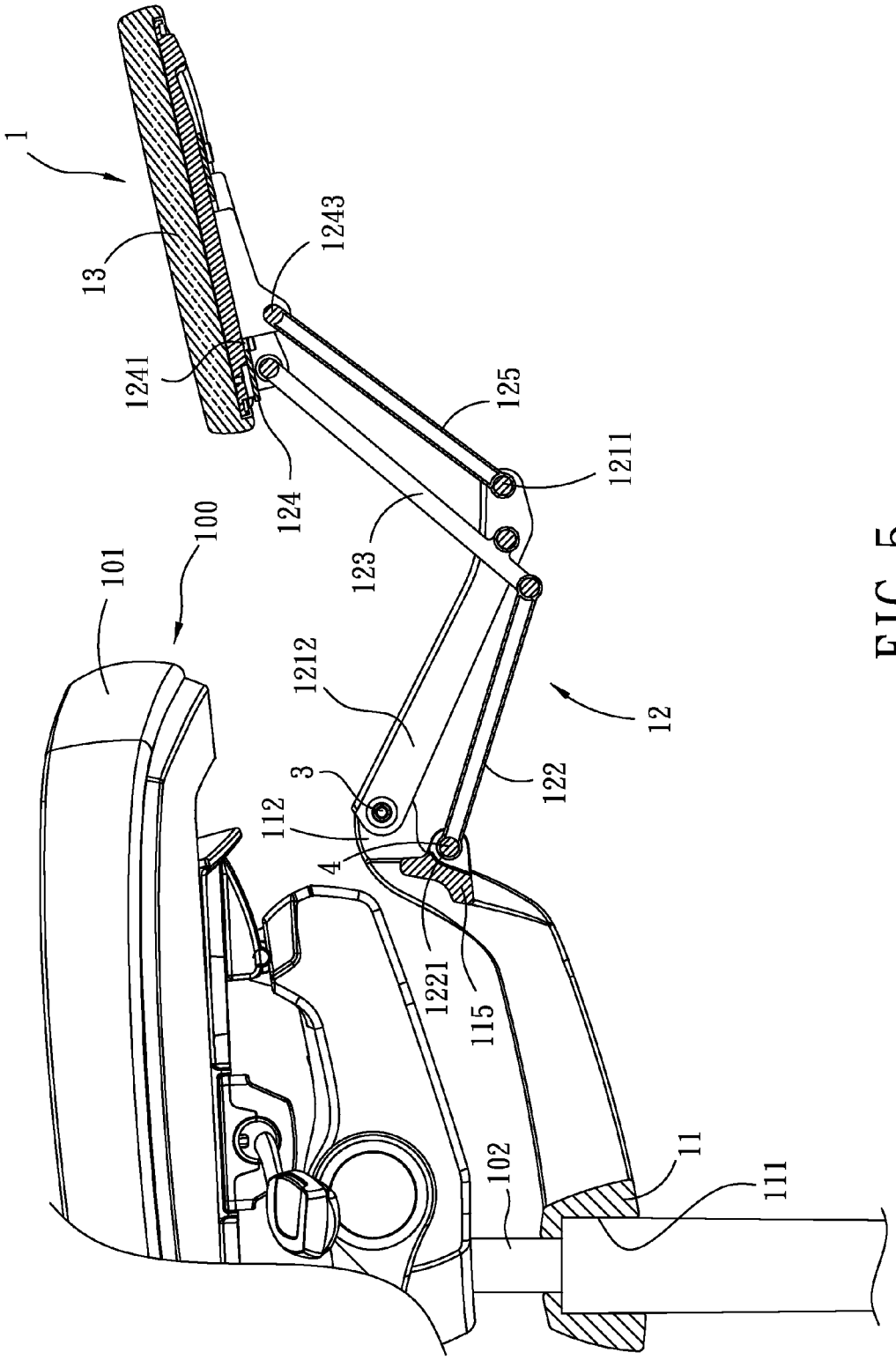
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FIG 5

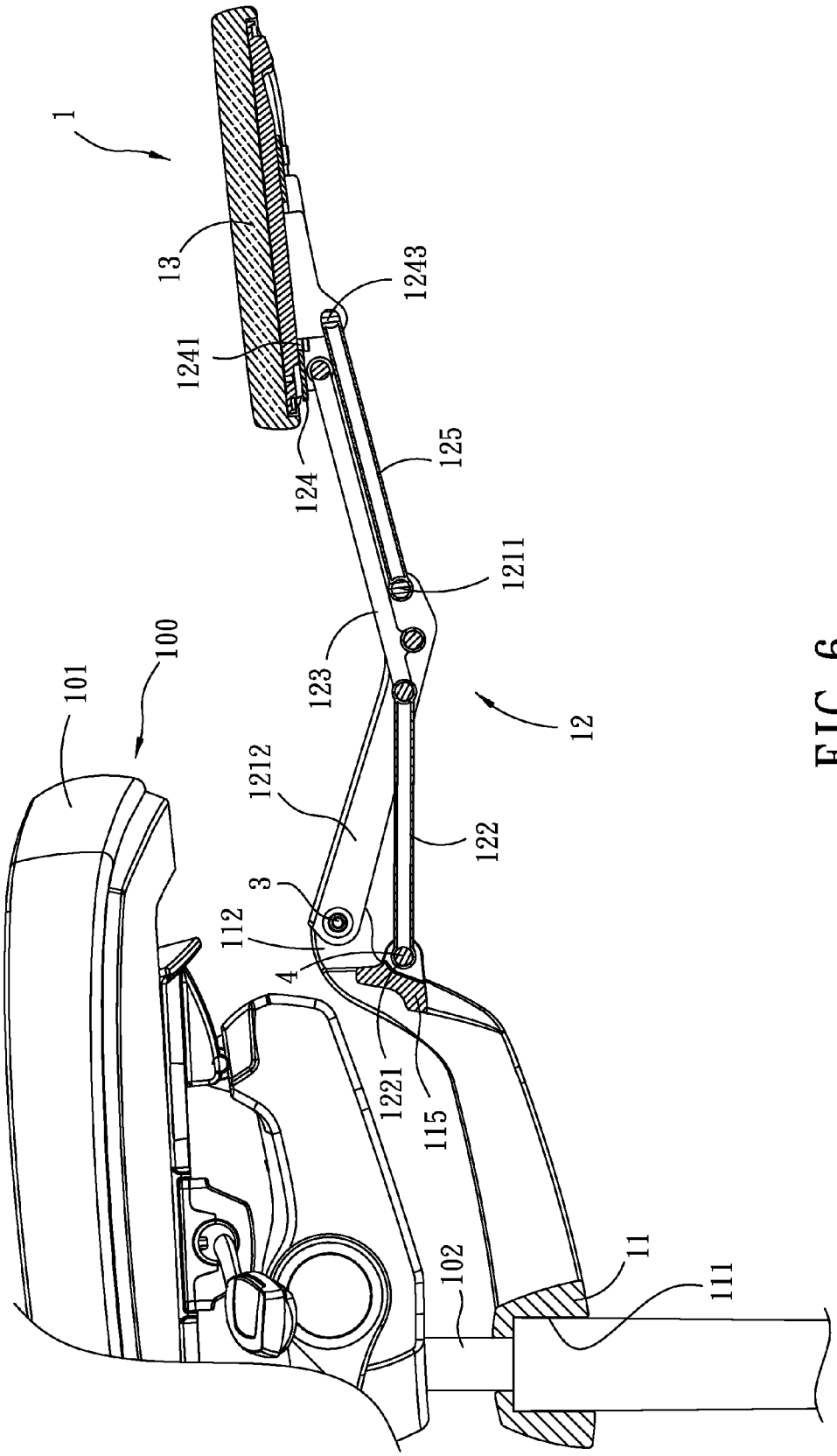
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FIG 6

RETRACTABLE LEG REST FOR CHAIR

BACKGROUND OF THE INVENTION

1. Technical Field

The invention relates to chairs, particularly to a chair with a leg rest.

2. Related Art

Office chairs with a cushion elevation mechanism and/or flexible back have been very popular. Although many chairs are provided with a flexible back with tilt flexibility, height position of the back cannot be adjusted to satisfy various users with different body length. Although existing chairs are very comfortable for users, almost all office chairs do not provide a leg rest for supporting a user's calves to allow a user to stretch his or her legs.

SUMMARY OF THE INVENTION

An object of the invention is to provide a retractable leg rest for a chair, which can be stretched to support a user's calves and keep his or her legs horizontal when needed and can be retracted when not needed.

To accomplish the above object, the retractable leg rest for a chair of the invention includes a base frame and a retractable frame assembly. The base frame has a through hole and two connecting sockets. A connecting rod connects between the connecting sockets. Two hole seats are provided on the connecting rod. The retractable frame assembly connects with the base frame and includes a first support frame having two connecting arms and a main board connected therebetween. The connecting arms separately connect the connecting sockets. A link with a connecting tube perpendicularly extends from the main board. The connecting tube is coaxially connected between the hole seats. A second support frame rotatably connects to the main board. A support seat rotatably connects to the second support frame and has a transversal rod. A vertical rod is perpendicularly connected between the transversal rod and the main board. A support pad is fixed onto the support seat.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a schematic view of the invention assembled with a chair;

FIG. **2** is an exploded view of the invention;

FIG. **3** is an assembled view of the invention; and

FIGS. **4-6** are side views showing the movement of the invention in operation

DETAILED DESCRIPTION OF THE INVENTION

Please refer to FIGS. **1** and **2**. As shown, the retractable leg rest **1** of the invention is installed under a cushion **101** of a chair **100** and fastened onto a post **102**. The leg rest **1** primarily includes a base frame **11**, a retractable frame assembly **12** and a support pad **13**.

The base frame **11** is of a U-shape. An end of the base frame **11** is formed with a through hole **111** for being passed through by the post **102** of the chair **100**. The other end of the base frame **11** is formed with two connecting sockets **112** which are axially symmetrical. Each of the connecting sockets **112** is formed with a pivot hole **113** with a cap **2**. The pivot hole **113** is further formed with a threaded hole **114** for screwing with a bolt **3**. A connecting rod **115** is provided to connect between the connecting sockets **112**. Two hole seats **116** are provided on the connecting rod **115**.

Please refer to FIG. **2**. The retractable frame assembly **12** is rotatably connected with the base frame **11** and includes a first support frame **121**, a second support frame **123**, a support seat **124** and a vertical rod **125**. The first support frame **121** has two connecting arms **1212** and a main board **1211** connected therebetween. An end of each connecting arm **1212** is formed with a passing hole **1213**. The connecting arms **1212** are separately connected to the connecting sockets **112** by inserting the bolt **3** through the passing hole **1213** and pivot hole **113** and screwing the bolt **3** into the threaded hole **114**. A link **122** perpendicularly extends from the main board **1211**. The link **122** is parallel with the connecting arms **1212**. An outer end of the link **122** is provided with a connecting tube **1221**. The connecting tube **1221** is coaxially sandwiched between the hole seats **116**. A shaft **4** is inserted through the hole seats **116** and the connecting tube **1221** to make the link **122** rotatable with respect to the hole seats **116**. Two ends of the shaft **4** are separately fastened with two screws **5** to hold the shaft **4** and keep the link **122** rotatable with respect to the connecting rod **115**.

The second support frame **123** is a U-shape. A transversal portion of the second support frame **123** is rotatably connected to the main board **1211**. The second support frame **123** rotatably connects the support seat **124**. The support seat **124** has a rectangular hollow **1241**. Each of four corners of the support seat **124** is provided with a screw hole **1242**. The bottom of the support seat **124** is provided with a transversal rod **1243** with a vertical rod **125**. The vertical rod **125** is connected between the transversal rod **1243** and the main board **1211** so that the vertical rod **125** is rotatable with respect to the main board **1211**. Finally, the support pad **13** is fixed onto the support seat **124**. The bottom of the support pad **13** is provided with fixing holes **131** separately corresponding to the screw holes **1242**. Thus, the support pad **13** can be fixed onto the support seat **124** by screws **5** as shown in FIG. **3**.

Please refer to FIGS. **4-6**. As shown in FIG. **4** first, the leg rest **1** is completely retracted under the cushion **101** when the leg rest **1** is not needed. At this time, the retractable frame assembly **12** is overlapped with the support pad **13**. When the leg rest **1** is needed to be used, as show in FIG. **5**, a user can pull out the support pad **13** to stretch the second support frame **123** and the vertical rod **125** and to also stretch the first support frame **121**. Finally as shown in FIG. **6**, when the support pad **13** is completely pulled out, the link **122** is aligned with the second support frame **123**. The position and angle of the support pad **13** can be adjusted by rotating the link **122**, the second support frame **123** and the vertical rod **125**. The base frame **11** and the first support frame **121** may provide auxiliary support to the support pad **13**.

It will be appreciated by persons skilled in the art that the above embodiment has been described by way of example only and not in any limitative sense, and that various alterations and modifications are possible without departure from the scope of the invention as defined by the appended claims.

What is claimed is:

1. A retractable leg rest for a chair, comprising:

a base frame, having a first end and a second end, a through hole being formed in the first end for receiving a post of the chair, the second end being formed with two connecting sockets, a connecting rod being connected between the connecting sockets, and two hole seats being provided on the connecting rod;

a retractable frame assembly, connecting with the base frame, and comprising:

a first support frame, having two connecting arms and a main board connected therebetween, the connecting arms separately connected to the connecting sockets, a link perpendicularly extending from the main board, an outer end of the link is provided with a connecting tube, and the connecting tube being coaxially connected between the hole seats;

a second support frame, rotatably connected to the main board;

a support seat, rotatably connected to the second support frame, and having a transversal rod; and

a vertical rod, perpendicularly connected between the transversal rod and the main board, and being rotatable with respect to the main board; and

a support pad fixed onto the support seat.

2. The retractable leg rest of claim **1**, wherein the base frame is of a U-shape.

3. The retractable leg rest of claim **1**, wherein each of the connecting sockets is formed with a pivot hole with a cap, and the pivot hole is further formed with a threaded hole.

4. The retractable leg rest of claim **3**, wherein an end of each connecting arm is formed with a passing hole, and a bolt is inserted into both the passing hole and the pivot hole and is screwed into the threaded hole so that the connecting arms are separately connected to the connecting sockets.

5. The retractable leg rest of claim **1**, wherein the link is parallel with the connecting arms.

6. The retractable leg rest of claim **1**, further comprising:

a shaft inserted through the hole seats and the connecting tube; and

two screws, each being axially fastened into one end of the shaft, and the two screws holding the shaft and the link rotatable with respect to the connecting rod.

7. The retractable leg rest of claim **1**, wherein the second support frame is of a U-shape.

8. The retractable leg rest of claim **1**, wherein the support seat has a rectangular hollow, and each of four corners of the support seat is provided with a screw hole.

9. The retractable leg rest of claim **8**, wherein a bottom of the support pad is provided with fixing holes separately corresponding to the screw holes so that the support pad is fixed onto the support seat by screws.

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