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CHAIR BACK ADJUSTING MEANS

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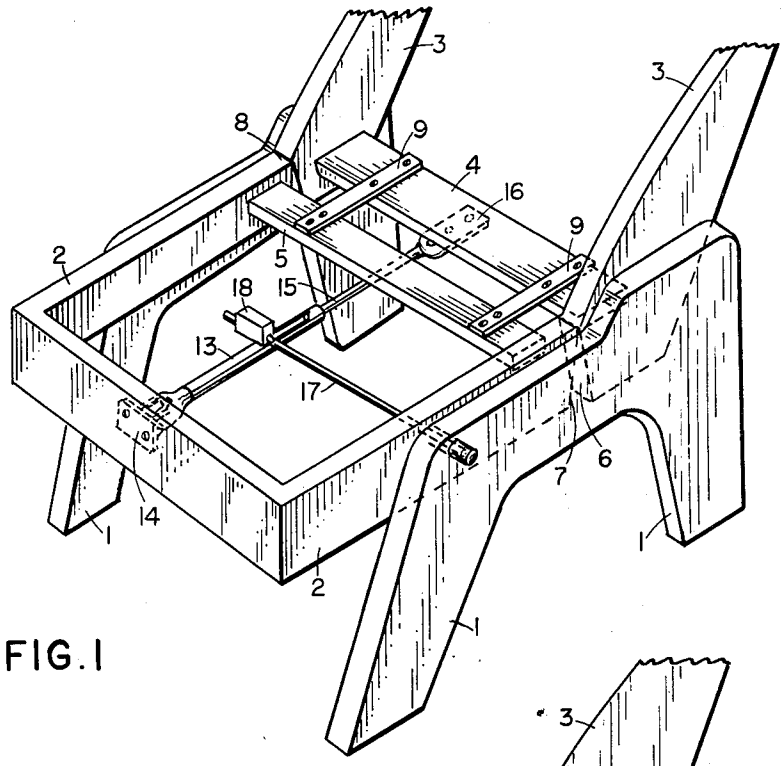


FIG. 1

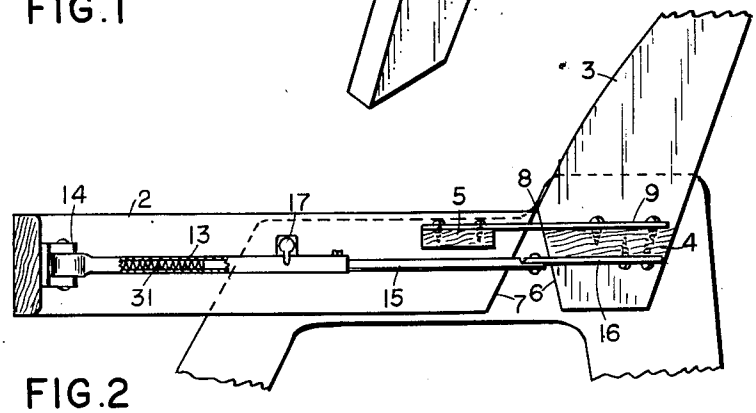


FIG. 2

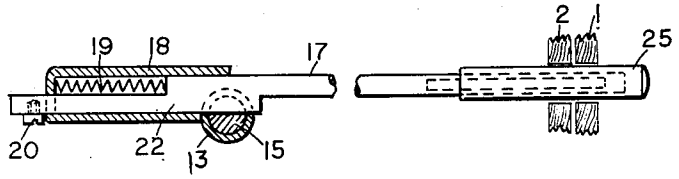


FIG. 3

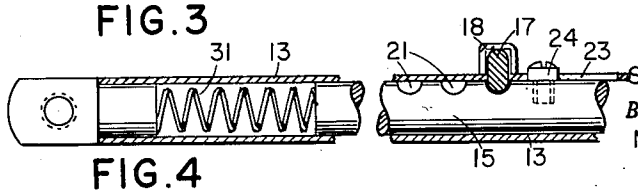


FIG. 4

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CHAIR BACK ADJUSTING MEANS

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This invention relates to improvements in chair devices, particularly arm-chairs, and it is one of the objects to provide an arm-chair by means of which it is made possible easily and quickly to adjust the chair-back in different angular positions in respect to the vertical plane, in order that the user may occupy the most comfortable and restful position.

The invention will be understood from the following description taken in connection with the accompanying drawings, which schematically and by way of example show an embodiment of the device according to the invention.

In the drawings:

Fig. 1 shows a chair-frame in a perspective view equipped with the device according to the invention;

Fig. 2 shows a vertical section of the chair-frame;

Fig. 3 shows a detail in section taken on line A—A in Fig. 4;

Fig. 4 shows a detail in section taken on line B—B in Fig. 3.

Referring now in more detail to the drawings, the numeral **1** denotes the chair-legs and **2** the seat-frame. The side-pieces of the chair-back are denoted by the numeral **3**. Between these side-pieces a cross piece **4** is provided, and in parallel relation to the said cross-piece there is between the side-pieces of the seat frame **2** provided a cross-piece **5**.

The end portions of the side-pieces **3** of the back-frame are bevelled at **6**, and the longitudinal side-pieces of the seat-frame **2** are correspondingly bevelled at **7** so that a V-shaped opening is formed between the said ends. When inclining the chair-back in another position than that shown in the drawing, the swinging axis will be as indicated at **8**.

The desired resiliency is obtained by means of a number of leaf springs **9**, the drawing indicating two such springs, which are arranged in longitudinal direction of the chair and fixed to the cross-pieces **4** and **5** by means of bolts or the like, the said springs being adapted to hold the chair-back in a position shown in Fig. 1.

In order to prevent that after the chair-back having been inclined to the desired position returns to its initial position, a locking device is provided which according to the embodiment shown in the drawings consists of a tubular member **13**. Tubular member **13** is maintained at its one end by means of a mounting **14** articulatingly fixed to the front cross-piece of the seat-frame. In the other end of the tubular member **13** a bar **15** is telescopically slidable. The free end of the said bar **15** is by means of a thin leaf spring **16** fixed to the underside of the cross-piece **4** of the back-frame. By these means the tubular member **13** may together with the bar **15** perform angular movements when the chair-back is inclined.

By means of a locking device the bar **15** may be locked in different positions within the tubular member **13**. As shown by Figs. 3 and 4, this locking device consists

of a bar **17** disposed perpendicularly to the longitudinally disposed axis of the tubular member **13** and the bar **15**. The bar **17** passes through a bore in the chair-leg **1** and the seat-frame **2**, and is on its outer end provided with a handle. On its inner end the bar **17** is longitudinally slidable within a casing **18** which is provided above a recess in the tubular member **13**. A spring **19** forces the bar **17** to an initial position. A stop-screw **20** will limit the longitudinal movement of the bar **17**.

The bar **15** which is longitudinally slidable within the tubular member **13**, is on the upper side provided with a number of transverse slots **21**, which a protruding portion **22** of the bar **17** may arbitrarily engage, thereby locking the bar **15** and consequently the chair-back in the desired position. The tubular member is provided with a longitudinal slot **23**, in which a stop-screw **24** is slidably disposed on the bar **15** and which stop-screw will limit the longitudinal movement of the bar **15**.

When pushing the handle in the direction of the arrow, against the force of the spring **19**, Fig. 3, in which the bar **17** is shown in locking position, the protruding portion **22** will disengage the slot **21**, and the bar **15** may be moved longitudinally within the tubular member **13**, until another slot comes into locking position, whereupon the handle **25** is relinquished, and the portion **22** engages the other slot **21**. According to another embodiment, not shown in the drawings, the bar **17** is on its inner end provided with teeth and adapted to engage, through a transverse bore on the tubular member **13**, grooves on the bar **15** which grooves correspond to the slots **21**.

In order to make it possible to slide the bar **15** to its initial position, after the locking device **17** having been released, a pressure spring **31** is provided with a certain initial pressure within the tubular member **13**, which spring will press upon the end of the bar **15**, as soon as the bar **17** disengages any of the slots **21**. Thus, the chair-back will return to its initial position.

In Figs. 1 to 4 there is described a device for chairs, particularly armchairs, by means of which it is possible easily and quickly to adjust the chair-back in different angular positions relative to the vertical plane, the said chair-back being pivotable by means of a spring device and adjustable in different angular positions by certain members which are adapted to lock or release the chair-back respectively.

The invention is not to be limited to the embodiments described in the specification and shown in the drawings, it being understood that the same may be varied and combined in many ways without departing from the spirit of the invention or limiting the scope of the invention.

It is evident that the embodiments herein described and visualized in the drawings may be used in all kinds of chairs, the chair-backs each of which is adjustable in different angular positions and lockable by means of a member equivalent to the bar **15***a*.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a chair construction, a generally horizontal seat frame, generally horizontal leaf springs having their forward ends fixed to said seat frame and extending rearwards therefrom, an upstanding chair back having its lower end fixed to the rearward ends of said leaf springs and resiliently supported by the latter for swinging movement between upstanding and inclined positions, adjustable means for resiliently locking said chair back in any selected position of its swinging movement, said locking means comprising a tubular member articulatingly affixed to the front of said seat frame and a bar slidable in said member, one end of said bar being flexibly affixed to said chair back, the other end of said bar

being provided with a plurality of slots located within said member, and a transverse bar springily disposed on said member and engageable with said slots, the free end of said transverse bar being slidably mounted in a side of said seat frame.

2. In an arm-chair according to claim 1, wherein said transverse bar is longitudinally slidable in a housing provided on said member and is provided on the inner end with a protruding portion which is adapted to engage said slots.

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