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CHAIR PROVIDED WITH AN ADJUSTABLE BACK

Filed Feb. 6, 1961

FIG. 1

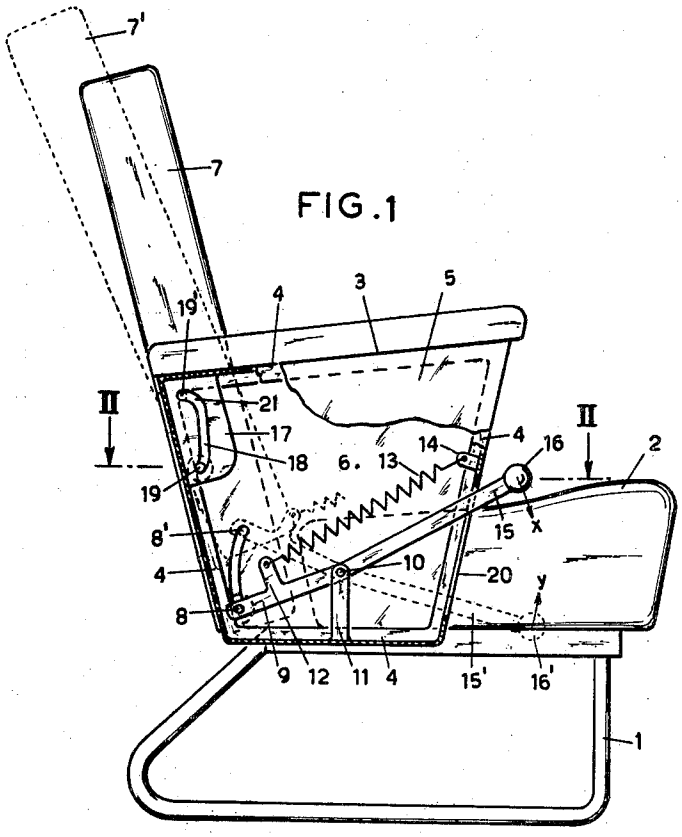
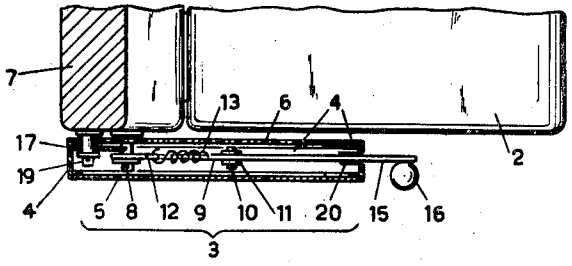


FIG. 2



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CHAIR PROVIDED WITH AN ADJUSTABLE BACK

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2 Claims. (Cl. 297—358)

The invention relates to chairs of the type provided with an adjustable back.

It is an object of the invention to provide an improved structure for a chair of the type having an adjustable back and a seat rigidly connected to a frame.

With respect to a chair of the type in which the seat is rigidly connected to the frame, it is an object of the invention to provide an improved structure wherein selection may be made between two positions of an adjustable back, and which structure is particularly suitable for application in motor buses, touring cars, aircraft and similar vehicles.

In the first of the above positions, the back should be in vertical or substantially vertical alignment, and a restricted chair height should be provided so that the view of anyone sitting behind the same is obstructed as little as possible.

In the other of said positions, the back must give the user comfortable support in a reclined position, with the user's head resting on the upper end of the back. According to the invention in this second position, the back, in addition to being pivoted rearwardly, is also extended. Thus, a practical support of the user's head can be obtained without necessitating that the back in the first position obstructs the view of anyone sitting behind.

A chair according to the invention is characterized by the provision of an improved means for pivotally supporting a back relative to a frame having a seat thereon, said means comprising a lever pivotally supported on the frame and connected to said back and further comprising a pin on the back and guided in a slot such that the back is elevated and tilted by operation of the lever and such that the back is supported by said pin when tilted.

The invention will next be explained with reference to the accompanying drawing in which:

FIG. 1 is a side-view of a chair provided in accordance with the invention with one of the covering plates removed therefrom to show the interior construction; and

FIGURE 2 is a cross-sectional view taken along line II—II of FIGURE 1.

The chair in the drawing is provided with a rigid frame 1 which may be constructed of metal tubes and upon which a fixed seat 2 is mounted. The frame supports two arm rests 3 which are constructed in the shape of a U-profile 4 having side covering plates 5 and 6 on opposite sides.

The back 7 is indicated in FIGURE 1 with solid lines in the forward position and with dotted lines in the backward raised-end position. The back 7 is connected with a shaft 8 located at the lower edge of the back and the ends of which engage the arms of a lever 9 having fulcrums 10 which are located on both sides of the back and which are carried by supports 11 connected to the frame 1 of the chair. The arm of the lever 9 includes

a projecting part 12 engaging one end of a spring 13, the other end of which is connected to a lip 14 on the U-profile 4. One of the levers 9 supports an operating arm 15 provided with a control knob 16. Said arm 15 passes through a slot in the body of the U-profile 4.

Each profile 4 supports a guiding plate 17 provided with a guiding slot 18 for guiding a pin 19 connected with the back 7.

The apparatus works as follows: When the user of the chair wishes to move the back 7 from the forward position into the position shown with dotted lines, he moves the control knob 16 downwards in the direction of the arrow X. The shaft 8, together with the back 7, is forced upwards into the position 8' and the pin 19 moves to the position 19'. The back moves to the position 7'. The section 21 of the slot 18 deviates from the vertical direction and is inclined rearwardly. When reaching this section of the slot 18, the pin 19 begins to rest on the bottom of the slot. Part of the weight of the back is consequently supported by the guiding plate 17 whereby the load on the arm of the lever 9 is relieved. Due to the effect exerted by the spring 13 on arm 9, a proper locking of the back in the end position shown in dotted lines is obtained. By a lifting of the control knob from the position 16' in the direction of the arrow Y, the back 7 can be readjusted to the end position shown in solid lines.

What is claimed is:

1. A chair comprising a frame, a seat rigidly coupled to said frame, a back, and means pivotally supporting said back from said frame to tilt and simultaneously elevate said back with respect to said seat and independently thereof; said means comprising a lever pivotally supported on said frame, a pin pivotally connecting said back to said lever, and a further pin on said back, said frame being provided with a guide slot for guiding the latter said pin, such that said back is elevated and tilted upon pivotal movement of said lever in one direction, said guide slot being provided with an inclined portion for automatically supporting said latter pin with the back elevated and tilted.

2. A chair comprising a frame, a seat rigidly coupled to said frame, a back, an arm lever pivotally supported on said frame, a pair of cross pins on said back and spaced from one another, said frame being provided with a guide slot for one of said cross pins, said lever being coupled to the other of said cross pins for adjusting the position of the back with respect to the frame in response to pivotal movement of said lever, said guide slot being oriented such that said back is elevated and tilted with respect to said frame upon pivotal movement of said lever in one direction, the slot being provided with a terminal portion corresponding to an elevated and tilted position of the back, which terminal portion is inclined from the vertical for supporting said one pin therein.

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