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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

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Jon W. Dudas

Director of the United States Patent and Trademark Office



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(12) **United States Patent**
Wen

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(54) **RESILIENCE TILT-ADJUSTED DEVICE OF BACKREST**

6,945,603 B2 * 9/2005 Elzenbeck 297/303.4
7,080,884 B2 * 7/2006 Daeschle et al. 297/303.4

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* cited by examiner

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

An office chair having a resilience tilt-adjusted device of a backrest includes an upper and a lower casing put together to cover an elastic adjuster which can press one end of elastic members with difference forces. Another end of the elastic members leans against an axle rod which is disposed at the lower end of the backrest supporter. The two ends of the axle rod pass through the casing. The lower end of the backrest is pivotally connected to a predetermined area within the casing as a pivot for swinging. A positioning rod having a rack is passed through the center of the axle rod so as to insert the rack onto the guiding groove of the casing. A positioning piece is arranged upon the rack and can be controlled to move up and down for inserting its end into the rack. Therefore, when the positioning piece is inserted into or exited from the rack, the backrest supporter can be positioned in a desirable angle after tilting. Also, when the positioning piece is away from the rack, the user can have a different level of resilience against leaning on the backrest by the adjustment of the elastic adjuster as well as the elastic members.

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(58) **Field of Classification Search** 297/301.4,
297/301.7, 303.4, 303.1, 300.5, 300.8

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,222,783 A * 6/1993 Lai 297/301.4
5,725,276 A * 3/1998 Ginat 297/289

6 Claims, 9 Drawing Sheets

