No. 740,967. PATENTED OCT. 6, 1903.

W. A. WYLIE.

RECLINING CHAIR.

APPLICATION FILED OCT. 25, 1902.

NO MODEL.

Fig. 1.

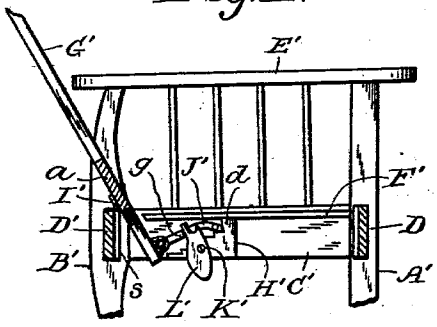


Fig. 2.

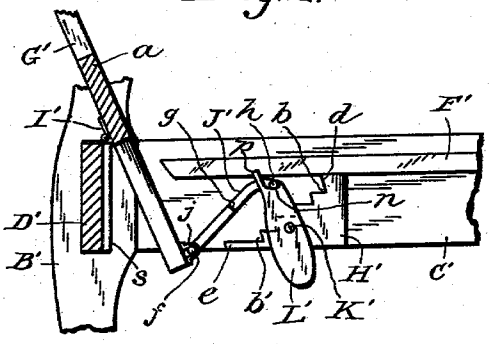


Fig. 3.

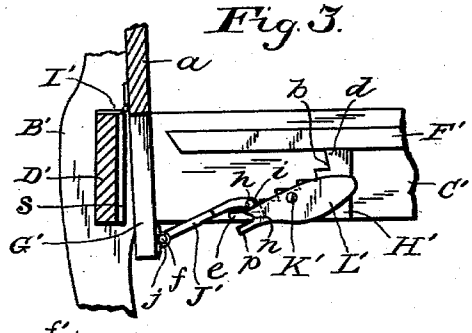


Fig. 4.

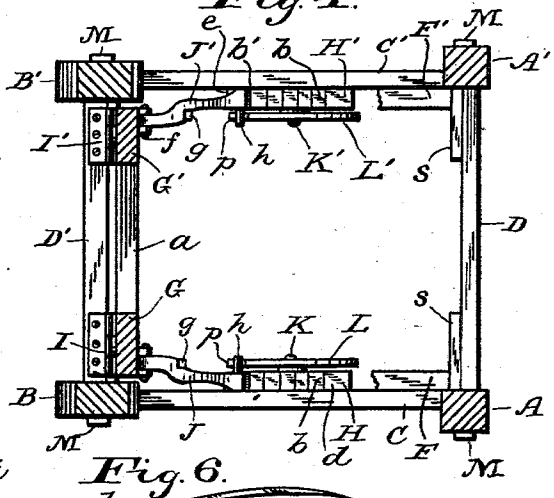


Fig. 5.

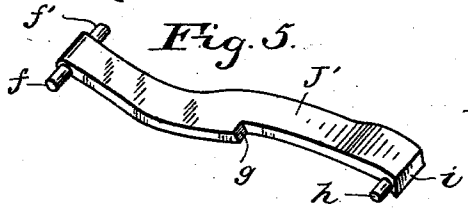
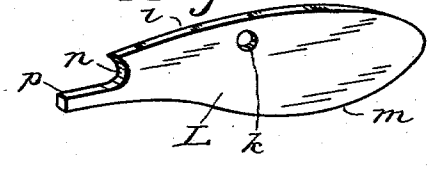


Fig. 6.



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No. 740,967. Patented October 6, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM A. WYLIE, OF INDIANAPOLIS, INDIANA.

RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 740,967, dated October 6, 1903.

Application filed October 25, 1902. Serial No. 128,766. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WYLIE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Reclining-Chairs; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to automatically-adjustable reclining-chairs, the invention having reference more particularly to the automatic adjustable devices for holding the chair-back in various positions.

The object of the invention is to simplify the adjusting devices for the backs and also to render them positive and noiseless in operation, as well as cheap in construction, durable, and economical in use.

My invention consists in a position-adjuster comprising a rack-bar and a gravity-adjusting brace operating in connection with the rack-bar and an automatically-operating gravity-tumbler for carrying the brace in its reversing direction clear of the rack-bar; and the invention consists also in the novel parts and in the combination and arrangement of parts, as hereinafter particularly described and claimed.

Referring to the drawings, Figure 1 is a fragmentary vertical sectional view longitudinally of a chair in which the back-frame is adjusted for the reclining position; Fig. 2, a fragmentary vertical sectional view longitudinally, showing the manner in which the holding devices operate while the chair-back is being changed from the upright to the reclining position; Fig. 3, a view similar to that in Fig. 2, but with the back nearly in full upright position, as when held in position for use; Fig. 4, a horizontal sectional view in a plane above the lower cross-rail of the back-frame, showing the back-frame in its full vertical position and the adjusting devices ready to carry out the reverse movements; Fig. 5, a perspective view of one of the pair of adjusting-braces for the back; Fig. 6, a perspective view of the gravity-tumbler.

In construction the main frame of the chair may comprise suitable front corner-posts A A′ and rear posts B B′, each combining in its function a leg and also a support for an arm-rest, side rails C C′, front and rear rails D D′, and arm-rests, as E′. The side rails are provided with ledges F F′ at the inner sides thereof, upon which a seat-frame may be supported or upon which slats may be placed for supporting a seat-cushion. Usually the seat is stationary; but obviously the frame may be provided with a movable seat. The back-frame, as usual, includes a pair of side bars G G′ and a lower cross-bar *a*, secured to the side bars somewhat above the lower ends thereof. Otherwise the back-frame may be constructed, like the main frame, according to fancy. The side bars of the back-frame are pivoted, by means of hinges I I′, attached to the rear parts thereof near the plane of the cross-bar *a*, to the rear rail D′, the hinges being preferably attached to the top of the rear rail.

The side rails C C′ or similarly-situated supporting members are provided with stationary rack-bars H H′, having notches, as at *b* and *b′*, at their tops, which are preferably inclined, as indicated. The rack-bars are each provided with an elevated stop member *d* and also have each a guide *e* at the opposite end thereof from the stop member or at the end nearest to the back-frame. The rack-bars are preferably composed of wood, or they may be metallic and may have the operative parts covered with such material as would not cause noises in operation.

The side bars G G′ of the back-frame are provided at or near the lower ends thereof with metallic adjusting-braces J J′, each pivoted at one of its ends to a side bar, as by means of pivot-pins *f f′*, cast integrally with the bar, and clips or staples *j*, attached to the bars and extending over the pins, the pivoting devices guiding the braces laterally. Each brace has a stop-shoulder *g* at one side thereof, and a cylindrical pin *h* projects from the same side of the brace at or near the free end *i* thereof, the end *i* being adapted to enter the notches in the rack-bar. Each rack-bar is provided with a pivot K or K′, projecting from the outer side of the body portion thereof, on which is mounted a metallic gravity-tumbler L or L′, having a perforation *k* near the working side *l* thereof and having

also a weighted end and side m to poise the device on its pivot, which latter extends through the perforation k. In the lighter end of the tumbler is a notch n, beyond which projects a finger p. The tumblers are so poised as to normally hang nearly in upright positions on their pivots in the vertical planes corresponding to the planes at the sides of the braces from which the pins h project.

It will be obvious that the adjusting devices for the chair-back may be employed in connection with the reclining or adjustable portions of other articles of furniture than chairs, such as benches and similar seats and couches or the like. In some cases one set only of adjusting devices may be provided.

In practical use the back may be automatically adjusted to any position within its range by the occupant of the chair. When the chair-back is in reclining position, the end i of the brace will engage the notch b farthest from the seat-back, as in Fig. 1. Now if the top of the chair-back be slowly moved forwardly the brace will successively drop into all the notches in the rack-bar and the back may be stopped at any point desired and may be leaned against and will be held by the brace and the rack-bar. When the back is brought nearly to a vertical position, the brace end will have reached the notch b' nearest to the back of the chair, as in Fig. 3. A little further movement of the chair-back to a vertical position, with the lower ends of the frame against the rail D', will cause the end i of the brace to ride out onto the guide e. During the movement of the chair-back to the vertical position the pin h will have come into contact with the side l of the tumbler and tilted the latter, the brace being the heavier, as in Fig. 3. At the last movement the contact of the pin h will change from the side l to the finger p, as will be apparent by reference to Figs. 3 and 4. Now if the top of the chair-back be pushed rearwardly until stopped the pin h will be pushed into the notch n, which will be in a plane above the plane of the pivot of the brace and that of the tumbler. Consequently the upper end of the tumbler will be pushed up and by means of the pin in the notch n will carry the free end of the brace above and clear of the notches to the stop d, when the pin h will be released from contact in the notch n, the end i of the brace falling gently into the notch b and the tumbler gravitating to its normal position, being stopped by the shoulder g. The above-described movements and adjustments may be made at will with scarcely any effort other than the changing of positions of the occupant of the chair.

Having thus described my invention, what I claim as new is—

1. An article of furniture including a stationary part, an adjustable part, a rack-bar secured to the stationary part and having notches in the top thereof, a fixed pivot situated intermediately of the ends of the rack-bar at a side thereof in a plane below the plane of the notches, a gravity-tumbler mounted on the pivot and normally poised thereon, and a movable adjusting-brace connected to the adjustable part and extending to the rack-bar and having a side projection engaging one side of the tumbler during movements of the brace in one direction, and engaging an end of the tumbler during reverse movements of the brace.

2. A chair including an adjustable back-frame, a fixed rack-bar having a notched face, an eccentrically-pivoted tumbler having a notch therein and a projecting finger at a side of the notch, and a movable adjusting-brace connected to the back-frame and extending to the notched face and having a pin projecting from a side thereof in range of the finger and the notch of the tumbler, whereby the tumbler may prevent engagement of the brace with the notched face during reverse movements of the brace.

3. A chair including an adjustable back-frame, a fixed rack-bar having a notched face and a guide at one end of the face, a pivoted tumbler having a notch in one end thereof and a projecting finger at a side of the notch, and an adjusting-brace pivoted to the back-frame so that the free end thereof may engage the rack-bar and the guide and having a pin projecting from a side thereof in range of the finger and the notch of the tumbler, whereby the tumbler may prevent engagement of the brace with the rack-bar during reverse movements of the brace and the back-frame.

4. An adjustable reclining-chair comprising a main frame having side rails provided with rack-bars each having a stop at one end and a guide at the other end thereof, a rear frame-rail, a back-frame pivoted to the rear rail, adjusting-braces pivoted to the back-frame and having each a stop-shoulder and a pin at one side thereof and normally coacting with a rack-bar and the stop and guide thereof, fixed pivots situated intermediately of the ends of the rack-bars, and tumblers mounted on the fixed pivots and having each a notch and a finger adapted to be engaged by the pins of the braces whereby the free ends of the braces may be carried from the guides to the stops of the rack-bars.

5. In a chair having a main frame and pivoted back-frame, the combination therewith, of rack-bars secured to the main frame, tumblers pivoted to the rack-bars and having weighted ends and also notches in the opposite ends thereof, and adjusting-braces pivoted to the back-frame and coacting with the rack-bars and having pins coacting with the notches in the tumblers, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. WYLIE.

Witnesses:
WM. H. PAYNE,
E. T. SILVIUS.