COMBINATION ADJUSTABLE BACK AND BED CHAIR

Fig. 1.

Fig. 2.

Fig. 3.

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Combination Adjustable Back and Bed Chair

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1 Claim. (Cl. 155—162)

1. The present invention relates to chairs and particularly to a combination adjustable back and bed chair.

2. Fig. 6 is a sectional detail, the plane of section being indicated by arcuate line 6—6 on Fig. 5. Fig. 7 is a perspective view showing separately the upstanding release lever.

3. A further and more specific object is to provide, and mount on the back of the chair frame, a bracket plate which forms, in the upper portion of the view. Fig. 5 is a fragmental section detail on line 5—5 of Fig. 2, the scale being enlarged.

4. The chair back structure comprises a swingable frame made up of an upper crosspiece 14, side pieces 15, and a lower crosspiece structure 16 having forwardly offset end portions 17 with which cooperate the pivot bolts 18 that are connected to the chair arms 12.

5. Referring in detail to the drawings, the arm chair shown comprises a chair frame 10, with an upholstered seat portion 11 and paired arms 12 between which is mounted the swingably adjustable back 13.

6. The chair back structure has a rearward extension 20 consisting of a block bolted or otherwise secured in place. Said blocks are each horizontally bored through to provide for having fitted within them the cylindrical casings 21 of the locking bolts 22. Said bolts are axially screwed onto stems 23 each of which has a diametrically enlarged end portion 24 terminating in a rounded head 25. The end of the lock casing 21 adjacent to the part 24 has an interposed flange 26 which loosely receives the stem 23. Against said flange abuts a coil spring 27 which tends to move each bolt to locked position. Each bolt 22 cooperates with a series of locking recesses 28, 28a in an arcuate, ratchet-like strip 29 attached to the adjacent part of the arm rest 12 at that side of the chair structure.

7. Simultaneous retraction of the twin locking bolts 22 is effected by means of a pair of wire traction rods 31, 31a having outer ends secured to the heads 25 and inner ends secured to the opposite ends of a common operating lever 32 which, at its middle length is secured to an operating shaft 33. Said operating shaft 33 (see Fig. 7) extends through a lower bearing strip 34 and an upper bearing strip 35 carried by the chair back and above the latter strip carries a right-angularly directed handle 36. Said handle closely underlies and is concealed by the back cover member 37 of the upholstery 38, so that the user of the chair, while seated thereon, can release the locking bolts by reaching his right hand over the back of the chair and applying pressure to said handle.
The aforesaid lower bearing strip 34 has a bracket plate 39 secured pendently to its back side, said plate having in its lower portion a supporting notch 40 with a horizontal lower side portion which supports the aforesaid lever 32 during its swinging movements, thus preventing the lever and its operating means from dropping down from their proper operative position.

As shown most clearly in Figs. 5 and 6 the upper locking recess 28a differs from the other recesses of said strip in that at its upper side it has a horizontal or right-angulary extending stop shoulder 41 whereas the corresponding shoulders or bevels 42 of the other recesses slope in such a manner as to allow the locking bolt to glide upwardly over them.

When it is desired to place the chair back in a more inclined position than that shown in Fig. 1, the person sitting in the chair reaches his right hand over his shoulder and presses forwardly upon the handle 36 underlying the fabric. This movement of the handle and lever 32 retracts the locking bolts 32 from the locking recesses which they engage. Thereupon the pressure of the individual's back against the chair back causes the latter to swing downwardly a selected distance, whereupon the pressure of the hand is removed from said handle 36, permitting the locking bolts to be urged outwardly under the pressure of their springs.

In this manner, if permitted to drop to a horizontal position, the back of the chair is placed in a position wherein it serves to convert the chair into a bed for repose in a recumbent position, especially when associated with an ottoman 44, as shown in Fig. 8.

When it is desired to elevate the back of the chair from a horizontal or from a more or less inclined position, all that it is necessary to do is to lift up on the top portion of the back of the chair, thus causing the locking bolts 32 to glide upwardly over the inclined face 42 of the ratchet strip until they reach the stop shoulder 41 of the uppermost pair of recesses, whereby the chair's back is held in the most steeply inclined position.

It will be seen from Figs. 1 and 2 that the operating handle 36 is placed to the right of the center of the chair to make said handle more accessible for manual operation.

I claim:

1. In a chair structure of the kind described, a chair frame, a chair back having its lower end portion pivoted to said chair frame so that said chair back is swingable between an upstanding and a substantially horizontal position, releasable locking means for said chair back, said locking means including locking bolts and bolt operating rods and springs all mounted upon the normally lower portion of said chair back and a ratchet carried by each side portion of the chair frame to cooperate with said bolts, said ratchets having teeth upwardly over which said bolts may glide against the opposition of said springs, a common operating means for said rods simultaneously to apply traction to them to release said bolts, said operating means for said rods comprising a lever one end of which is pivoted to one of said rods and the opposite end to the other of said rods, a manually turnable shaft having one of its end portions right-angulary secured to the midlength portion of said lever, two bearings carried by said chair back for said shaft, one of said bearings consisting of a horizontally extending strip located adjacent to the aforesaid lever, and a bracket plate attached to the latter strip, said bracket plate normally extending in a vertical plane, said bracket plate having cut into it a laterally extending notch with a lower edge portion which forms a bearing for said lever during manual turning thereof by means of said shaft, said notch also preventing said lever and shaft from gravitating below their normal operative position.

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