June 24, 1958 A. LORENZ 2,840,141

CHAIN WITH RECLINABLE SEAT AND BACK-REST AND COORDINATED LEG-REST

Filed April 23, 1954 2 Sheets-Sheet 1

Fig. 1.

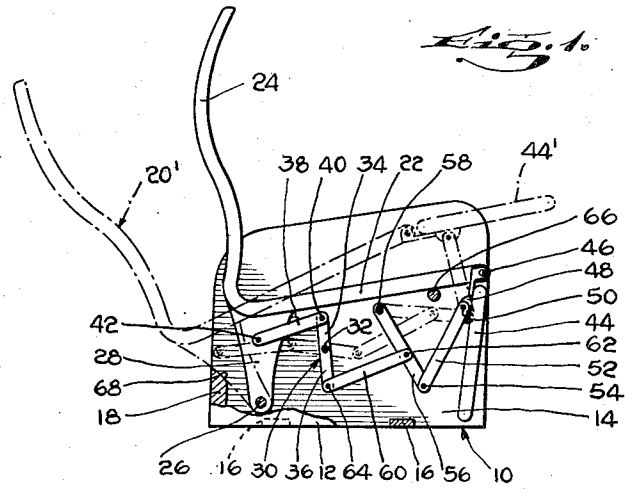
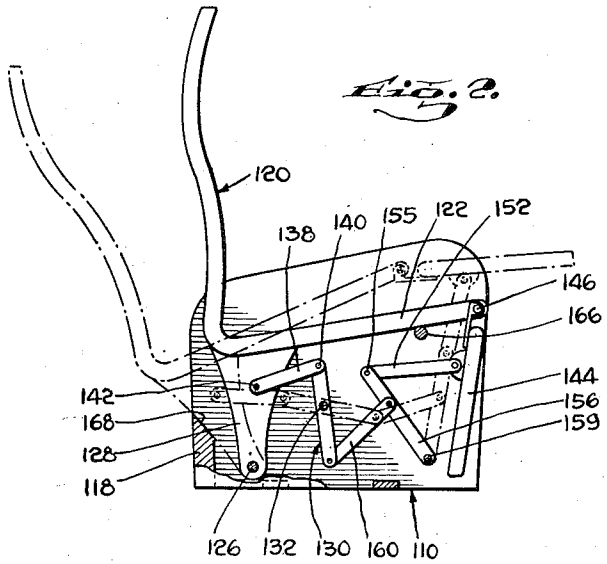


Fig. 2.



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Fig. 3.

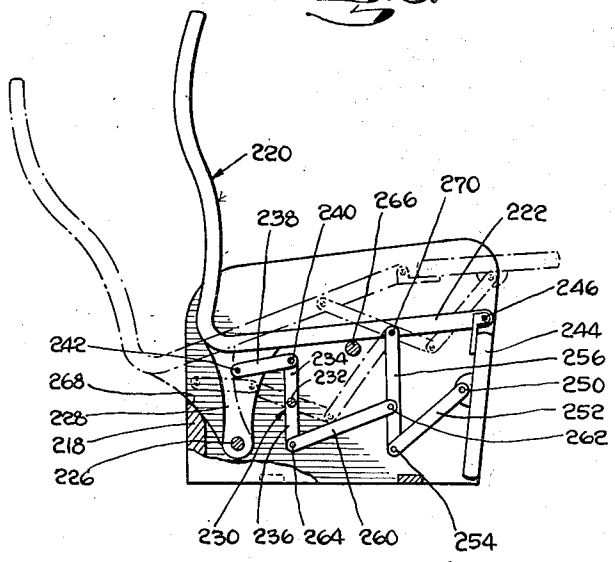
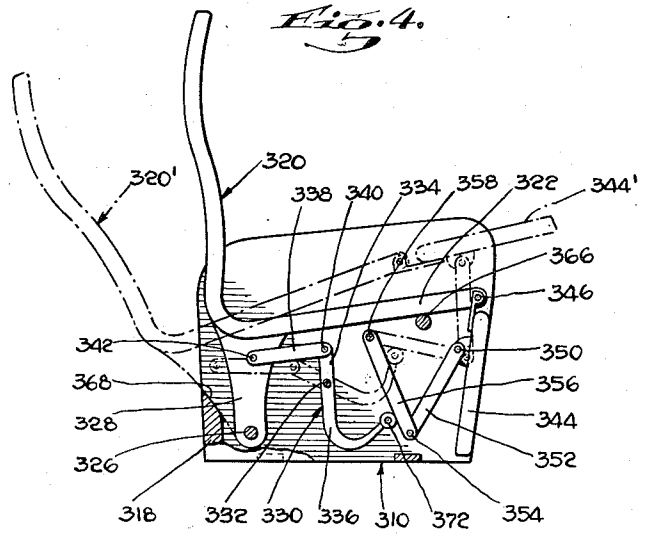


Fig. 4.



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2,840,141

CHAIR WITH RECLINABLE SEAT AND BACK-REST AND COORDINATED LEG-REST

Anton Lorenz, Boynton Beach, Fla.

Application April 23, 1954, Serial No. 425,254

8 Claims. (Cl. 155—106)

This invention relates to articles of furniture and more particularly to articles of repose for supporting the body of a person wherein a unit including a seat and a back-rest is rockably mounted on a support and wherein the movements of a leg-rest swingably mounted on the front portion of the seat are coordinated with the rocking movements of said unit.

An object of the invention is to provide an article of repose of above described type with a controlling mechanism for the leg-rest by means of which the desired movements of the leg-rest may be easily obtained.

Another object of the invention is to improve on the art of articles of repose as now customarily made.

Other objects and structural details of the invention will be apparent from the following description when read in conjunction with the accompanying drawings forming part of this specification, wherein:

Fig. 1 is a side elevational view of a reclining armchair according to the invention, a portion of a side frame being broken away,

Fig. 2 is a side elevational view of a different embodiment of a reclining armchair according to the invention, a portion of a side frame being broken away,

Fig. 3 is a side elevational view of a further embodiment of a reclining armchair according to my invention, a portion of a side frame being broken away, and

Fig. 4 is a side elevational view of still another embodiment of a reclining armchair according to my invention, a portion of a side frame being broken away.

Referring now to Fig. 1, 10 generally indicates a support having side frames 12 and 14 connected with each other by cross bars 16 and a rear wall 18.

A unit, generally indicated by 20, comprising a seat 22 and a back-rest 24 rigid with each other is rockably mounted on the support 10 by means of a pivotal connection 26 between a lower extension 28 of said unit 20 and the support 10. If desired, any other suitable arrangement for a rockable mounting of the unit 20 on the support 10 can be used.

A controlling member generally indicated by 30 is swingably mounted on the support 10 at 32. According to a preferred embodiment this controlling member 30 is in the shape of a double-armed lever having an upper arm 34 and a lower arm 36. The front end portion of a connecting link 38 is pivoted to the upper arm 34 of said double armed lever 30 at 40. The rear end portion of said connecting link 38 is pivoted to the extension 28 of the unit 20 at 42 at a point below the plane of the seat 22 and above the pivotal connection 26 between the extension 28 and the support 10. Thus the controlling member 30 may be swung about its pivot 32 in coordination with the swinging movements of the unit 20 about its pivot 26.

A leg-rest 44 is swingably mounted on the front portion of the seat 22 at 46. A lug 48 of the leg-rest 44 is pivoted at 50 to the upper end of a controlling bar 52, the lower end of which is pivoted at 54 to the lower

end of an arm 56. The upper end of said arm 56 is swingably mounted on the support 10 at 58. The front end of a connecting bar 60 is pivoted to said arm 56 at 62. The rear end of said connecting bar 60 is pivoted to the lower arm 36 of the double-armed controlling member 30 at 64. Thus the movements of the leg-rest 44 about its pivot 46 are controlled in coordination with the movements of the controlling member 30 by means of the controlling mechanism 60, 56 and 52. The controlling member 30 in turn is swung in coordination with the rocking movements of the unit 20 about its pivot 26.

When the unit 20 is brought from its sitting position shown in full lines into the reclined position 20' shown in dash and dot lines, the leg-rest 44 is propelled forwardly and upwardly into the position 44' shown in dash and dot lines.

The sitting position of the movable members of the chair is limited by a stop 66 mounted on the support 10 for cooperation with the lower surface of the seat 22. The extreme reclined position of the movable members of the chair is limited by the surface 68 of the rear wall 18 of the support 10 arranged for cooperation with the extension 28 of the unit 20.

According to the embodiment shown in Fig. 2, again the lower extension 128 of the back-rest-seat unit 120 is swingably mounted on the support 110 at 126. The controlling member 130 swingably mounted on the support 110 at 132 is controlled by the connecting link 138 pivoted at 140 and 142 to said controlling member 130 and to said extension 128 respectively. The controlling mechanism 160, 156 and 152 interposed between the controlling member 130 and the leg-rest 144 swingably mounted on the seat 122 at 146 also corresponds to the controlling mechanism of the chair shown in Fig. 1, with the exception, however, that the lower end of the arm 156 is pivoted at 159 to the support 110 and the upper end of said arm 156 is pivoted to the controlling bar 152 at 155. The sitting position of the movable members of the chair shown in full lines is limited by the stop 166 while the extreme reclined position of the movable members of the chair shown in dash and dot lines is limited by the surface 168 of the rear wall 118 of the support 110.

According to the embodiment of a reclining armchair shown in Fig. 3, the back-rest-seat unit 220 is rockably mounted on the support 210 at 226. The movements of the double-armed controlling member 230 swingably mounted on the support 210 at 232 are controlled by the connecting link 238 pivoted to the extension 228 of the unit 220 at 242 and pivoted to the upper arm 234 of the controlling member 230 at 240.

The leg-rest 244 swingably mounted on the seat 222 at 246 is pivoted to one end of the controlling bar 252 at 250. The other end of said controlling bar 252 is pivoted at 254 to the lower end of an arm 256, the upper end of which is pivoted to the seat 222 at 270. A connecting bar 260 is pivoted to said arm 256 at 262 and to the lower arm 236 of the controlling member 230 at 264.

The sitting position of the movable members of the chair shown in full lines is limited by the stop 266 mounted on the support 210 and the extreme reclined position of the movable members of the chair shown in dash and dot lines is limited by the surface 268 of the rear wall 218 of the support 210.

According to the embodiment shown in Fig. 4, again the back-rest-seat unit 320 is swingably mounted on the support 310 at 326. The lower arm 336 of the double-armed controlling member 330 swingably mounted on the support 310 at 332 is bent and carries a roller 372. The upper arm 334 of said controlling member 330 is pivoted at 340 to the front end of the connecting link 338, the

rear end of which is pivoted to the extension **328** of the unit **320** at **342** at a point below the plane of the seat **322** and above the pivot **326** of the unit **320**.

A leg-rest **344** swingably mounted on the front portion of the seat **322** at **346** is pivoted to one end of a controlling bar **352** at **350**. The other end of said controlling bar **352** is pivoted at **354** to the lower end of an arm **356**, the upper end of which is swingably mounted on the support **310** at **358**. The roller **372** carried by the double-armed lever **330** is in abutting engagement with the arm **356**.

When the unit **320** is swung from the sitting position shown in full lines into the reclined position **320'** shown in dash and dot lines, the leg-rest **344** is brought into the position **344'** by means of the controlling member **330** and the controlling mechanism **356**, **352**. The sitting position of the movable members of the chair is limited by the stop **366** arranged on the support **310** and the extreme reclined position of the movable members of the chair is limited by the surface **368** of the rear wall **318** of the support **310**.

I have described preferred embodiments of my invention but it is understood that this disclosure is for the purpose of illustration and that various changes in shape, proportion of parts, as well as the substitution of equivalent elements for those herein shown and described may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

Each of the embodiments of an armchair shown in the drawings could be provided with locking means for holding the movable members of the chair in any desired position.

Furthermore, if desired, any other suitable arrangement for limiting the sitting and reclined positions of the movable members of the chair could be used.

What I claim is:

1. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat and a back-rest rigid with each other, said unit being rockably mounted on said support, a controlling member swingably mounted on said support at an intermediate point between its upper and lower portions, a connecting link pivoted at different regions thereof to said unit and to the upper portion of said controlling member, the pivotal connection between said connecting link and said unit being below the plane of the seat, a leg-rest swingably mounted on the front portion of said seat, an arm swingably mounted on said support, a controlling bar pivoted at different regions thereof to said leg-rest and to said arm, and controlling means between the lower portion of said controlling member and said arm for effecting movements of the latter and the leg-rest in coordination with the movements of said controlling member.

2. In an article of repose as claimed in claim 1, said rockable mounting including an extension projecting below the plane of the seat, said extension being pivoted to said support, and said connecting link being pivoted to said extension of the unit at a point above the pivotal connection between said extension and said support.

3. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat and a back-rest rigid with each other, said unit being rockably mounted on said support, a controlling member swingably mounted on said support at an intermediate point between its upper and lower portions, a connecting link pivoted at different regions thereof to said unit and to the upper portion of said controlling member, the pivotal connection between said connecting link and said unit being below the plane of the seat, a leg-rest swingably mounted on the front portion of said seat, an arm swingably mounted on said support, a controlling bar pivoted at different regions thereof to said leg-rest and to said arm, and cooperating abutting means on the lower portion of said controlling member and said arm.

4. In an article of repose as claimed in claim 3, said controlling member being in the shape of a double-armed lever swingably mounted on the support, and said cooperating abutting means being arranged on the lower arm of said double-armed lever and said first mentioned arm.

5. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat, a back-rest and a depending extension rigid with each other, said extension extending below the plane of said seat and having a pivotal connection to said support rockably mounting said unit on said support, a controlling element swingably mounted on said support at a point intermediate its upper and lower portions, a connecting link disposed below the plane of said seat and pivoted at one portion thereof to said extension at a location spaced above the pivotal connection to said support and at another portion thereof to the upper portion of said controlling element, a leg-rest swingably mounted below the front portion of said seat, an arm, means swingably supporting said arm, a controlling bar pivotally connected at different portions thereof to said leg-rest and to said arm, and controlling means between the lower portion of said controlling element and said arm for effecting movements of the latter and the leg-rest in coordination with the movements of said controlling element.

6. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat and a back-rest rigid with each other, said unit being rockably mounted on said support, a controlling member swingably mounted on said support at an intermediate point between its upper and lower portions, a connecting link disposed below the plane of said seat and pivoted at different portions thereof to said unit and to the upper portion of said controlling member, a leg-rest swingably mounted below the front portion of said seat, an arm having an upper end portion swingably mounted on said support, a controlling bar pivoted at different regions thereof to said leg-rest and to said arm, and a connecting bar pivoted at different portions thereof to said arm and to the lower portion of said controlling member.

7. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat and a back-rest rigid with each other, said unit being rockably mounted on said support, a controlling member swingably mounted on said support at an intermediate point between its upper and lower portions, a connecting link disposed below the plane of said seat and pivoted at different portions thereof to said unit and to the upper portion of said controlling member, a leg-rest swingably mounted below the front portion of said seat, an arm having a lower end portion swingably mounted on said support, a controlling bar pivoted at different regions thereof to said leg-rest and to said arm, and a connecting bar pivoted at different portions thereof to said arm and to the lower portion of said controlling member.

8. An article of repose for supporting the body of a person, comprising in combination: a support, a unit including a seat, a back-rest and a depending extension rigid with each other, said extension extending below the plane of said seat and having a pivotal connection to said support rockably mounting said unit on said support, a controlling element swingably mounted on said support at a point intermediate its upper and lower portions, a connecting link disposed below the plane of said seat and pivoted at one portion thereof to said extension at a location spaced above the pivotal connection to said support and at another portion thereof to the upper portion of said controlling element, a leg-rest swingably mounted below the front portion of said seat, an arm

swingably mounting on said support, a controlling bar pivoted at different portions thereof to said leg-rest and to said arm, and controlling means between the lower portion of said controlling element and said arm for effecting movements of the latter and the leg-rest in coordination with the movements of said controlling element.

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