

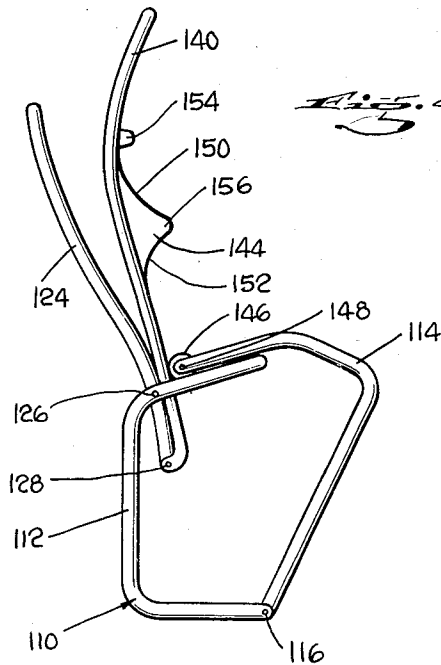
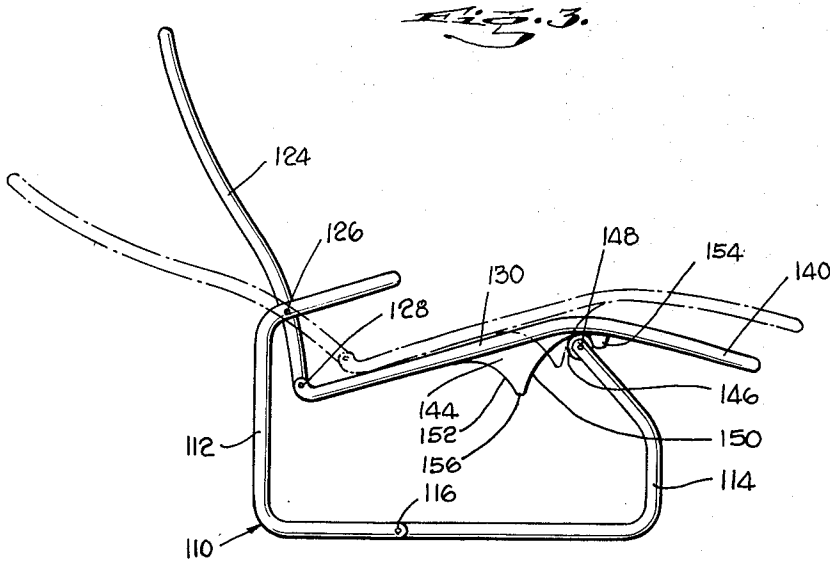
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LOUNGE CHAIR

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2 Sheets-Sheet 2



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LOUNGE CHAIR

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This invention relates to articles of furniture, and more particularly to lounge-chairs.

An object of the invention is to provide a lounge-chair having a back-rest and a seat included in a link system, which lounge-chair may be readily collapsed and set up.

Another object of the invention is to provide a collapsible lounge-chair, which may be collapsed in such a manner that it occupies in its collapsed condition less than one half of the space it occupies when set up.

A further object of the invention is to provide a lounge-chair equipped with a link system including a movable back-rest and a movable seat, wherein the movable members of the lounge-chair assume automatically their sitting position upon a person leaving the chair.

Another object of the invention is to provide a lounge-chair with a movable back-rest and seat, which may be readily manufactured at a low cost.

A further object of the invention is to improve on the construction of lounge-chairs as now ordinarily 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 lounge-chair according to the invention when set up;

Fig. 2 is a side elevational view of the lounge-chair shown in Fig. 1, the lounge-chair, however, being in a collapsed condition;

Fig. 3 is a side elevational view of a different embodiment of a lounge-chair according to the invention, when set up, and

Fig. 4 is a side elevational view of the lounge-chair shown in Fig. 3, the chair, however, being in collapsed condition.

Referring now to Figs. 1 and 2, 10 generally indicates a collapsible support comprising a rear portion 12 and a front portion 14 pivotally connected with each other at their aligned ground engaging portions at 16. Each of said front and rear portions of the support comprises tubular side frames connected with each other by cross bars or the like. The extreme end of each side frame of the rear portion 12 of the support forms an arm-rest 18. The rear portion 12 and front portion 14 of the collapsible support 10 are provided with abutting surfaces 20, 22, arranged for limiting a swinging movement of the front portion 14 about the pivot 16 in clockwise direction.

A back-rest 24 swingably mounted on the rear

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portion 12 of the support 10 at 26 is pivotally connected at its lower end at 28 with the rear end portion of a seat 30. On each side of the chair, the front end portion of the seat 30 is pivotally connected at 32 with the upper end of a link 34 pivoted at its lower end to the front portion 14 of the support 10 at 36. The pair of links 34 are connected with each other by a cross bar 38.

A leg-rest 40 is rigidly connected with the seat 30. In the embodiment shown in the drawings the frames of the seat 30 and the leg-rest 40 are integral with each other.

When the lounge-chair is set up, as shown in Fig. 1, the sitting position of the movable back-rest 24 and seat 30 is limited by an abutment of the seat 30 against the upper end of the link 34. The position of the link 34 in turn is limited by a stop 37 mounted on the front portion 14 of the support 10 for cooperation with a projection 39 of the link 34. A person resting on the chair may readily bring the movable members of the lounge-chair from the sitting position, shown in full lines in Fig. 1, into a reclined position, shown in dash and dot lines in Fig. 1, by leaning the weight of his body against the back-rest 24. When the person leaves the chair, the movable members of the chair will automatically return from the reclined position into the sitting position.

If desired, the extreme reclined position may be limited by a stop (not shown) which may be arranged on the rear portion of the support for cooperation with the back-rest.

Furthermore, locking means may be arranged for holding the movable members of the chair in an intermediate reclined position.

As may be gathered from the Fig. 1, a plane 42 including the pivot 26 between the back-rest 24 and the rear portion 12 of the support 10 and the pivot 28 between the back-rest 24 of the seat 30, when the movable members of the chair are in the sitting position, intersects the ground engaging portion of the support at the point A, which is farther away from the front end of the lounge chair than the pivotal connection 16 between the rear portion 12 and the front portion 14 of the support. This feature prevents the support 10 from an undesired automatic collapsing when a person sits on the chair. Preferably the location of the pivots 26, 28 and 16 is chosen in such a way that the plane 42 including the pivots 26 and 28 includes also the pivot 16 or intersects the rear portion 12 of the support 10 at a point to the left from the pivot 16, as viewed in Fig. 1.

When the lounge-chair shall be shipped or

stored away or carried from one place to another, it can readily be collapsed and brought into the condition shown in Fig. 2. During the collapsing operation, which for example could be carried out by holding the back-rest 24 and swinging the seat 30 about the pivot 28 towards the back-rest 24, the front portion 14 of the support 10 is swung relative to the rear portion 12 of the support 10 about the pivot 16. (See Fig. 1.) The distance a between the pivot 16 and the rear end of the chair is less than one half of the distance b between the front end of the leg-rest 40 and the rear end of the chair. Thus, the chair occupies in the collapsed condition less than one half of the space it occupies when set up. This feature is very practical for shipping the lounge-chair in a crate.

According to the embodiment shown in Figs. 3 and 4 the collapsed support 110 again comprises a rear portion 112 and a front portion 114 pivotally connected with each other at 116. If desired, abutting means could be provided for so as to limit the relative movement of the front portion 114 to the rear portion 112 in clockwise direction.

The back-rest 124 swingably mounted on the rear portion 112 of the support 110 at 126 is pivotally connected at 128 with the rear end portion of the seat 130. The pivotal connection 128 between the seat 130 and the back-rest 124 is located below the plane of the pivotal connection 126 between the back-rest 124 and rear portion 112 of the support 110.

Again the frames of the seat 130 and the leg-rest 140 are integral with each other.

On each side of the chair a cam 144 is secured to the seat 130. Furthermore, on each side of the chair a roller 146 journaled at 148 on the front portion 114 of the support 110 is arranged for cooperation with the cam 144. The cam has two oppositely inclined camming surfaces 150 and 152.

When the chair is set up, as shown in Fig. 3, the movable members of the chair may be brought from the sitting position, shown in full lines, into a reclined position, shown in dash and dot lines, by swinging the back-rest 124 about its pivot 126. During this movement the roller 146 is engaged with the cam surface 150 of the cam 144 for causing a predetermined movement of the seat in coordination with the movement of the back-rest.

The sitting position of the movable members of the chair is limited by an abutting engagement of the roller 146 with a stop 154 carried by the leg-rest. If desired, the extreme reclined position of the movable members of the chair may be limited by another stop (not shown).

A rounded intermediate surface 156 forms a transition between the camming surfaces 150 and 152.

During the collapsing of the chair the roller 146 may move along the camming surface 150, thereafter along the rounded portion 156 and then along the camming surface 152, whereupon it comes into engagement with the straight portion of the seat 130. Thus, by swinging the front portion 114 of the support 110 about the pivot 116, the seat 130 is brought into the elevated position shown in Fig. 4.

According to the embodiment shown in Figs. 3 and 4, the seat 130 and the cam 144 carried by the seat are disengageable from the roller 146. If desired, however, means could be provided for,

for example a curved slot could be arranged on the seat, for holding the roller 146 in non-detachable engagement with the seat.

Furthermore, if desired, holding means, such as hooks or the like, could be arranged on the chair in such a manner, that they hold the members of the chair in the collapsed condition, shown in Fig. 4, when they are brought into their holding position.

Furthermore, if desired, the roller 146 may be replaced by an abutting surface arranged on the front portion 114 of the support 110 for cooperation with the cam 144.

I have described preferred embodiments of the invention, but it is understood that this disclosure is for the purpose of illustration, and that various omissions or changes in shape, proportion and arrangement 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.

What I claim is:

1. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, means, interposed between the front portion of said support and the front end portion of said seat, for effecting movement of the latter in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat.

2. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, means, interposed between the front portion of said support and the front end portion of said seat, for effecting movement of the latter in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat, the pivotal connection between the front and rear portions of said support being nearer to the front end of the chair than a plane including the pivotal connection between the back-rest and the rear portion of the support and the pivotal connection between the back-

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rest and the seat when the back-rest and seat are in the sitting position.

3. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, means, interposed between the front portion of said support and the front end portion of said seat, for effecting movement of the latter in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat, the pivotal connection between the front and rear portions of said support being nearer to the front end of the chair than the pivotal connection between the back-rest and the seat.

4. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, a link, the lower end portion of said link being pivoted to the front end portion of said support, the upper end portion of said link being pivoted to the front end portion of said seat, and a leg-rest connected with said seat.

5. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, cooperating abutting surfaces arranged on the front portion of said support and on the front end portion of said seat for mutual engagement so as to effect movement of the seat in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat.

6. A lounge-chair comprising in combination: a collapsible support including a front portion

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and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, a camming surface arranged on the front end portion of the seat, an abutting surface arranged on the front portion of said support for engagement with said camming surface so as to effect movement of the seat in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat.

7. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, a camming surface arranged on the front end portion of the seat, a roller rotatably mounted on the front portion of said support for engagement with said camming surface so as to effect movement of the seat in coordination with a movement of the back-rest when the collapsible support is set up for use, and a leg-rest connected with said seat.

8. A lounge-chair comprising in combination: a collapsible support including a front portion and a rear portion, a back-rest swingably mounted on the rear portion of said support, a seat, the rear end portion of said seat being pivoted to said back-rest at a point below the connection between the back-rest and the rear portion of said support, said front portion of the support having a first ground engaging base section extending substantially in a longitudinal direction, said rear portion of the support having a second ground engaging base section extending substantially in longitudinal direction and aligned with said first ground engaging base section, said front and rear portions of the support being pivotally connected with each other at their base sections at a point below the seat, cooperating guiding means arranged on the front portion of said support and on the front end and at least the center portion of said seat for mutual engagement so as to effect movement of the seat in coordination with a movement of the back-rest when the collapsible support is set up for use and to move the seat into a collapsed position in coordination with a movement of the front portion of the support during

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the collapsing of the support, and a leg-rest connected with said seat.

9. In a lounge-chair as claimed in claim 8, said guiding means including a cam mounted on the seat and provided with oppositely inclined camming surfaces, and an abutting surface arranged on the front portion of said support for cooperative engagement with said cam.

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