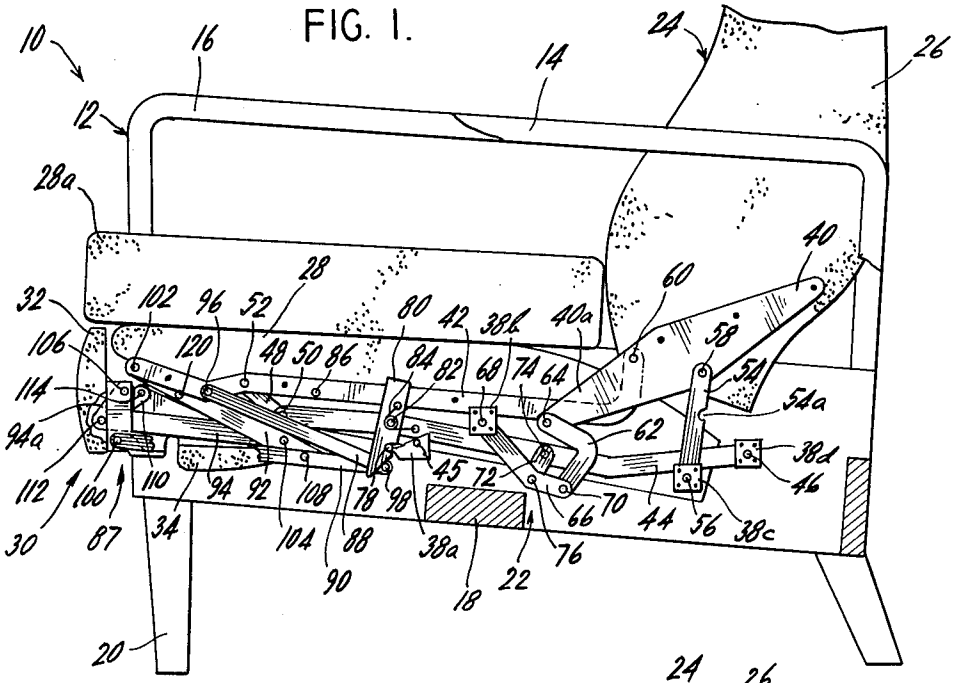
Feb. 8, 1966 P. S. FLETCHER 3,233,938

RECLINING CHAIR OF THE MULTIPLE MOVEMENT LOUNGER TYPE

Filed Nov. 19, 1963 3 Sheets-Sheet 1

FIG. 1.



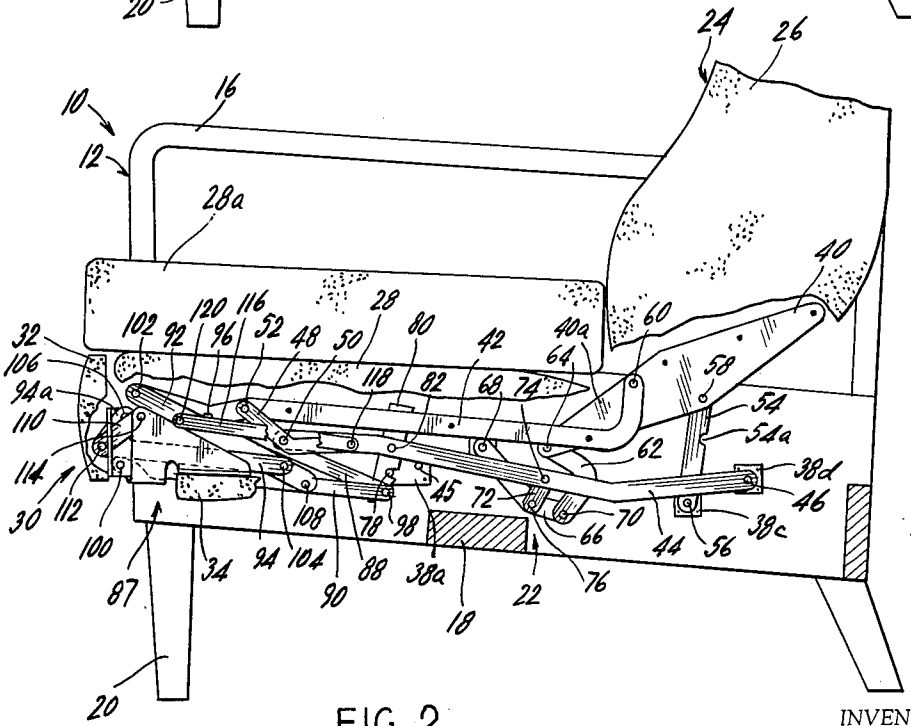


FIG. 2.

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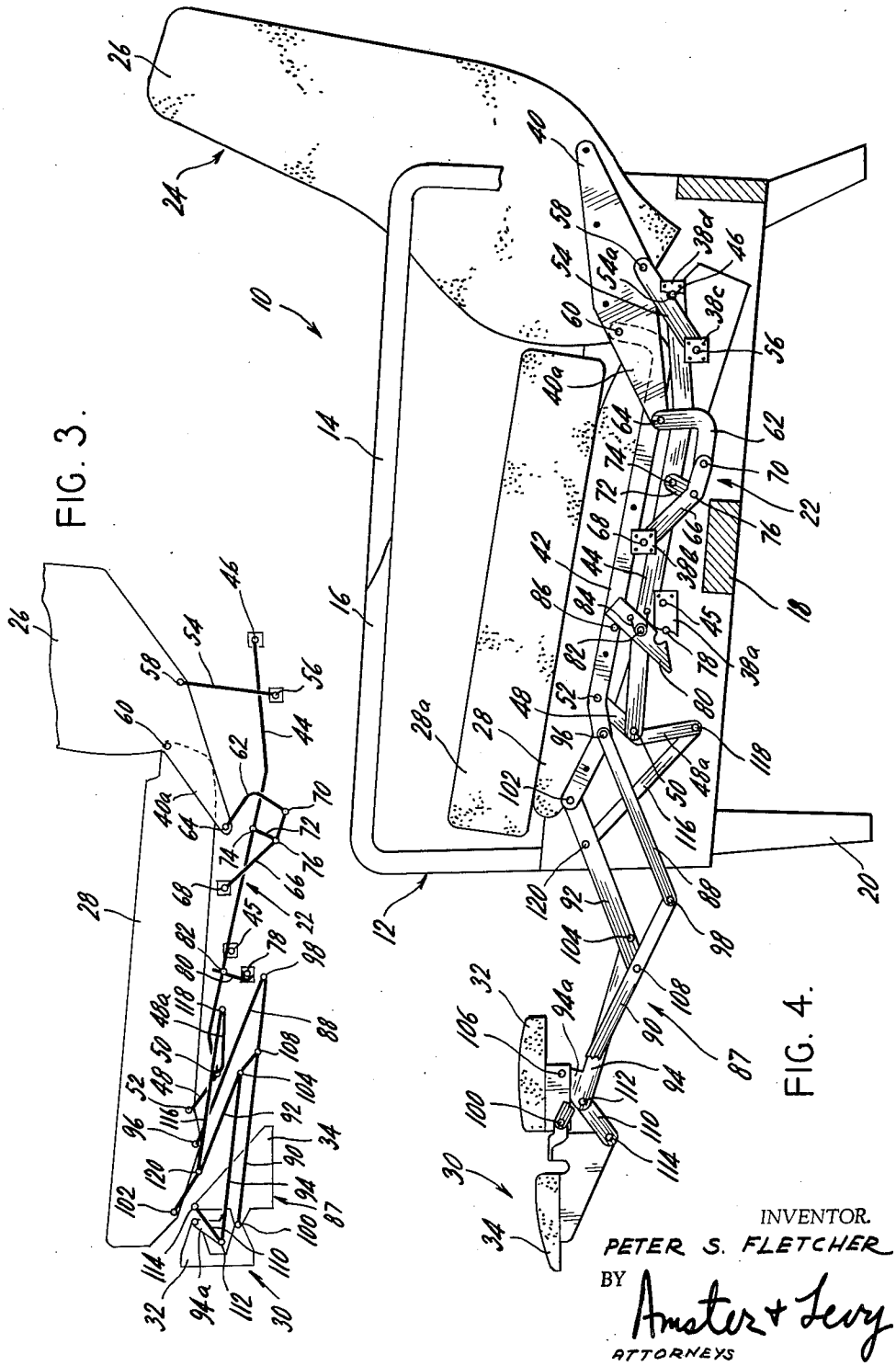


FIG. 3.

FIG. 4.

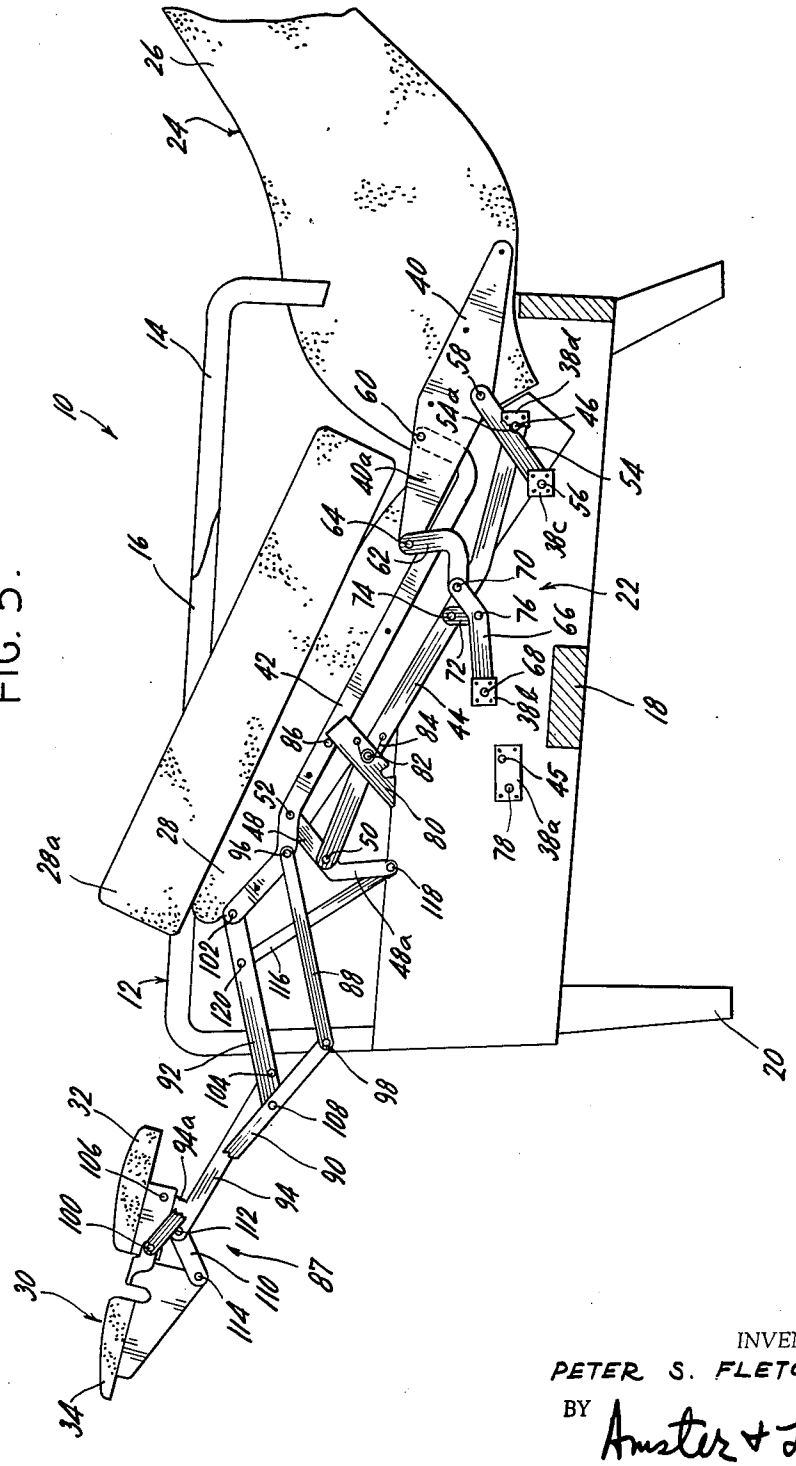
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FIG. 5.



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United States Patent Office

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RECLINING CHAIR OF THE MULTIPLE MOVEMENT LOUNGER TYPE

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Filed Nov. 19, 1963, Ser. No. 324,798

9 Claims. (Cl. 297—84)

The present invention relates generally to reclining chairs, and in particular to a reclining chair of the multiple movement lounger type.

A multiple movement lounger type of reclining chair comprises a support and body-supporting means including a bcak-rest and seat mounted on the support for movement from an upright sitting position through a first movement phase to an intermediate, tilted sitting position and for movement through a second phase from the intermediate, tilted sitting position to a fully reclined position. Such a reclining chair usually incorporates a leg-rest which is movable from a stored position beneath the forward end of the seat when the body-supporting means is in the upright sitting position to an extended and elevated leg-supporting means is moved through the first movement phase to an intermediate, tilted sitting position, the leg-rest remaining in the extended and elevated leg-supporting position throughout the second movement phase and as the body-supporting means moves into the fully reclined position. In such a chair, the angle between the seat and back-rest usually remains relatively fixed during the first movement phase to maintain the chair occupant in a sitting attitude, both in the upright position and in the intermediate position, with provision being made for opening up the included angle between the seat and back-rest as the chair moves into the fully reclined position.

Broadly, it is an object of the present invention to provide a reclining chair of the aforesaid general type.

As is generally understood, most reclining chairs incorporate so-called chair hardware in the form of two identical mechanisms or linkages disposed one at each side of the chair, which hardware mounts the back-rest, seat and leg-rest on the support for movement relative to each other to establish the several positions with optimum balance and smooth operation. Not only must the chair hardware or linkage take into account the aforesaid functional requirements but it must also be adaptable to a particular environment. One of the most difficult problems is to realize the functional requirements in high leg and open frame construction which is characteristic of Scandinavian and light scale modern design where there is a practical maximum chair depth and corresponding length of the chair linkage which can be tolerated to realize proportions which meet esthetic requirements.

It is a further object of the present invention to provide a reclining chair of the multiple movement lounger type which realizes one or more of the aforesaid requirements. Specifically, it is within the contemplation of the present invention to provide a reclining chair mechanism which is particularly suited for achieving the well coordinated movement and the optimum positions of comfort which are characteristic of a good multple movement lounger type of chair which is compatible with the esthetic requirements imposed by light scale styling.

In accordance with an illustrative embodiment demonstrating objects and features of the present invention, there is provided a reclining chair of the multiple movement lounger type which comprises a support and body-supporting means including a back-rest and seat, with the latter being pivotally mounted on the back-rest at a seat pivot. A carrier member is mounted on the support for turning movement about a carrier pivot. A front seat guiding link is pivotally mounted on the carrier member at a front

pivotal mount and pivotally connected to the seat at a front pivotal connection and a rear back-rest guiding link is pivotally mounted on the support at a rear pivotal mount and pivotally connected to the back-rest at a rear pivotal connection. A holding link is pivotally connected to the back-rest at a holding pivotal connection spaced forwardly of the rear pivotal connection and forwardly of the seat pivot, with the portion of the back-rest between the rear pivotal connection and the holding pivotal connection defining a back-rest link. A second movement control linkage is operatively connected to the support and preferably includes a second movement lever pivotally mounted on the support at a lever pivot and having a pivotal connection to the holding link and a second movement connecting link pivotally connected to the second movement lever and to the carrier member. Provision is made for maintaining the carrier member stationary during a first movement phase wherein the body-supporting means moves from an upright sitting position to an intermediate, tilted sitting position. During such first movement phase, the front seat guiding link and the rear back-rest guiding link turn about their respective pivotal mounts to guide the body-supporting means into the intermediate, tilted sitting position, with the holding link effectively maintaining a prescribed angular relationship between the seat and back-rest during such first movement phase. Provision is made for blocking further turning movement of the rear back-rest guiding link about the rear pivotal mount at the end of the first movement phase and when the body-supporting means is in the intermediate, tilted sitting position such that the rear pivotal connection will serve as a stationary pivotal mount for the back-rest during a second movement phase wherein the body-supporting means moves from the intermediate, tilted sitting position to a fully reclined position. The turning movement of the carrier member about the carrier pivot and the turning movement of the back-rest about the rear pivotal connection are coordinated by the second movement control linkage to open up the included angle between the seat and back-rest during the second movement phase. A leg-rest is suspended from the seat for movement from a stored position when the body-supporting means is in the upright sitting position to an extended and elevated leg-supporting position when the body-supporting means is in the intermediate, tilted sitting position. As will be detailed hereinafter, the aforesaid construction is particularly suited to meet both the functional and esthetic requirements of a high leg, light scale multiple movement lounger type of chair.

The above brief description, as well as further objects, features and advantages of the present invention will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment, demonstrating features of the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a side elevational view, with parts broken away and sectioned, showing a reclining chair of the multiple movement lounger type in an upright sitting position, and particularly showing the chair linkage or hardware at the near side of the chair as viewed from the outer face thereof;

FIG. 2 is a view similar to FIG. 1, but with the chair hardware or linkage at the near side of the chair removed to show the inner face of the chair hardware at the far side of the chair which is a mirror image of the chair hardware at the near side of the chair;

FIG. 3 is a schematic showing of the chair in the upright sitting position, with the chair linkage shown in the form of a stick diagram to facilitate an understanding of the invention;

FIG. 4 is a side elevational view similar to FIG. 1, but showing the chair in the intermediate, tilted sitting position and with the leg-rest in the extended and elevated leg-supporting position; and

FIG. 5 is a side elevational view similar to FIG. 4, but showing the chair in the fully reclined position, with the included angle between, the seat and back-rest having been opened up and with the leg-rest still in the extended and elevated leg-supporting position.

Turning now specifically to the drawings, there is shown a reclining chair of the multiple movement lounger type demonstrating features of the present invention, which is generally designated by the reference numeral **10**, and incdudes a support or frame **12** having its opposite sides **14, 16** interconnected by suitable cross braces **18** and supported on depending legs **20**. As is generally understood, substantially identical chair linkages which are mirror images of each other are mounted on the chair frame or support **12** inwardly of the opposite sides **14, 16,** with the linkage **22** at the near side being illustrated from its outer side and with the linkage **22'** at the far side **16** being illustrated from its inner face. Since the linkages **22, 22'** are of identical construction and are shown as an aid in understanding this exceptionally compact linkage mechanism, identical reference numerals will be applied to the elements of the linkages **22, 22'** and the description will proceed in terms of only one of the two linkages, it being understood that the other linkage is identical thereto.

Body-supporting means **24** including a back-rest **26** and a seat **28** having a loose cushion **28***a* are movably mounted on the support **12** for reclining and inclining movement respectively through a first movement phase from an upright sitting position illustrated in FIGS. 1 to 3 to an intermediate, tilted sitting position illustrated in FIG. 4 and for a second movement phase from the intermediate, tilted sitting position illustrated in FIG. 4 through a series of reclining positions to the fully reclined position illustrated in FIG. 5. Disposed beneath the forward end of the seat **28** is a two-part leg-rest **30** which includes a main section **32** serving as a filler board across the forward end of the chair and an extension section **34**, with the arrangement being such that the main section **32** and the extension section **34** rapidly move into alignment with each other by mechanisms to be described. Normally, the main section **32** and the extension section **34** are in a stored position as illustrated in FIG. 1, with the extension section **34** extending substantially at right angles to the main section **32** and projecting beneath the seat **28**. During the first movement phase, and as may be appreciated by progressively inspecting FIGS. 1 and 4, the leg-rest **30** moves from the stored position to an extended and elevated leg-supporting position forwardly of the seat, with the leg-rest extension section **34** coming into alignment with the main section **32**. As the chair moves from the intermediate, tilted sitting position illustrated in FIG. 4 through the series of reclining positions to the fully reclined position illustrated in FIG. 5, the leg-rest **30** remains in the extended leg-supporting positions, moving more or less as a unitary assembly with the seat, as may be appreciated by progressively inspecting FIGS. 4 and 5.

The chair linkage or hardware **22, 22'** may include a single main supporting plate or separate brackets **38***a, b, c* and *d*, as illustrated in the drawing, secured to the adjacent side of the chair frame **12**, a back-rest bracket **40** which is secured to and physically and kinematically becomes part of the adjacent side of the back-rest **26** and a seat bracket **42** which is secured to the adjacent side of the seat **28**. For all intents and purposes, the respective brackets may be considered to be parts of the support **12**, the back-rest **26** and the seat **28** respectively. A carrier member **44** extends lengthwise of the linkage **22** beneath the seat bracket **42** and is pivotally mounted at its rearward end on the support at a carrier pivot **46** for turning

movement through an upward arc in the clockwise direction during the second movement phase, as may be appreciated by progressively inspecting FIGS. 4 and 5. A stud or stop **45** normally supports the carrier link **44** in an inactive position as shown in FIGS. 1 and 2. A front seat guiding link **48** is pivotally mounted at the forward end of the carrier member **44** at a front pivotal mount **50** and pivotally connected to the seat **28** via the seat bracket **42** at a front pivotal connection **52**. A rear back-rest guiding link **54** is pivotally mounted on the support **12** at a rear pivotal mount **26** and pivotally connected to the back-rest **56** via the back-rest bracket **40** at a rear pivotal connection **58**. The rear pivotal connection **58** is spaced rearwardly of the pivotal mount **60** between the seat **28** and the back-rest **26**, which pivotal mount is provided at the upturned rearward end of the seat bracket **42**. A holding link **62**, which is of generally L-shaped configuration, is pivotally connected to the back-rest **26** at a holding pivotal connection **64** at the forward end of the back-rest bracket **40** forward of the pivotal mount **60**.

The portion of the back-rest bracket **40** and, therefore, from a kinematic point of view, the back-rest **26**, between the rear pivotal connection **58** and the holding pivotal connection **64** defines a relatively long back-rest link which is preferably of a length of the order of six inches. It will be understood that the back-rest link **58–64** is, kinematically, part of the back-rest **26**. Practical experience in the design of multiple movement linkages indicates that the back-rest link as measured between its operative connections to the rear back-rest guiding link **54** and the holding link **62** should be relatively long to assure optimum functioning of the chair. For example, if the effective length of the back-rest link is made relatively small, the play encountered in the pivots of the holding link and back-rest guiding link in a typical chair would cause undue looseness and wobbling of the back-rest **26** at its upper end. Even with play in the riveted joints of ten thousandths of an inch, which is the normal clearance to be expected in the commercial manufacture of reclining chair hardware, there would be a wobble at the upper end of the back-rest of over one-half an inch, taking into account the magnification factor of 15 which would result from the employment of a two inch back-rest link with a back-rest having a height of thirty inches. The above illustrative example does not take in account the effect the higher stress on the joints and the resultant strain and rivet wear, both of which would contribute to further looseness. However, the provision of a relatively long back-rest link in the order of six inches in length is often difficult to achieve and in particular presents a problem with a chair of high leg, light scale modern styling since for such a chair there is a practical maximum chair depth and a corresponding maximum length of the operating linkage which can be tolerated to obtain good proportions. With the present linkage, it is possible to locate and design the back-rest guiding means such that the same will be hidden from view, both in the normal sitting position of the chair shown in FIG. 1 and in the intermediate, tilted sitting position shown in FIG. 4, and to provide for an optimum length for the back-rest mounting link as determined between the back-rest pivotal connection **58** and the holding pivotal connection **64**.

A second movement control linkage is operatively connected to the support **12**, to the holding link **62** and to the carrier member **44** and includes a second movement lever **66** which is pivotally mounted on the support **12** at a lever pivot **68** adjacent the upper end thereof and has a pivotal connection **70** to the holding link **62**. The second movement control linkage is completed by a second movement connecting link **72** which has a pivotal connection **74** at its upper end to the carrier member **44** and a pivotal connection **76** at its lower end to the second movement lever at a point spaced from the lever pivot **68**.

Provision is made for blocking the carrier member **44** against turning movement about the carrier pivot **46** at

the start of the first movement phase wherein the body-supporting means **24** is in the upright sitting position. Specifically, such blocking means includes a pin and hook sequencing means embodying a pin **78** fixed to the support and engaged within a notch provided on a hook member **80** which is pivoted on the carrier member **44** at a hook pivot **82**. A spring **84** is operatively connected to the hook member **80** to normally bias the hooked end thereof into engagement with the pin **78** as seen best in FIGS. 1 and 2. Towards the end of the first movement phase, and as the body-supporting means **24** moves into the intermediate, tilted sitting position shown in FIG. 4, the hook member **80** is contacted by a releasing pin **86** mounted on the seat rail **42** which swings the hook member **80** out of engagement with the pin **78**, as seen in FIG. 4, to thereby release the carrier member for turning movement through an upward arc in the clockwise direction about the carrier pivot **46** during the second movement phase.

During the first movement phase, the front seat guiding link **48** turns about the relatively stationary pivotal mount **50** while the rear back-rest guiding link **54** turns about the rear pivotal mount **56** to guide the body-supporting means **24** into the intermediate, tilted sitting position shown in FIG. 4, with the holding link **62** being effective to substantially maintain a relatively fixed angular relationship between the seat **28** and the back-rest **26** throughout the first movement phase.

Provision is made for blocking further turning movement of the rear back-rest guiding link **54** in the clockwise direction about the rear pivotal mount **56** at the end of the first movement phase such that the rear pivotal connection **58** will serve as a relatively fixed pivot for the back-rest **26** during the second movement phase and as the body-supporting means **24** moves from the intermediate, tilted sitting position shown in FIG. 4, through a series of reclining positions to the fully reclining position shown in FIG. 5. In this illustrative embodiment, a notch **54***a* is provided on the rear back-rest guiding link **54** which is positioned to engage a stud at the carrier pivot **46** serving as a stop at the end of the first movement phase and when the chair is in the intermediate, titled sitting position.

During the second movement phase, and with the hook member **82** disengaged from the sequencing pin **78**, the carrier member **44** is free to turn about the carrier pivot **46** and the back-rest **26** will turn about the rear pivotal connection **58**. The turning movement of the carrier member **44** about the carrier pivot **46** and the turning of the back-rest **26** about the rear pivotal connection **58** is coordinated throughout the second movement phase by the second movement control linkage **66**, **72** and the holding link **62** to open up the included angle between the seat **28** and the back-rest **26**. The design of the second movement linkage and its several operative connections in addition to opening up the included angle between the seat and back-rest must take into account other factors, including balance, the relative positions of the seat and back-rest to each other throughout the second movement phase to establish successive reclining positions, and the like.

In this illustrative embodiment, the two-part leg-rest **30** is suspended from the seat **28** by a leg-rest mounting linkage **87** which incorporates a toggle linkage mechanism of the type disclosed and claimed in U.S. Patent No. 2,945,533 of July 19, 1960, in the name of Peter S. Fletcher, which patent is assigned to the assignee of the instant application. The leg-rest mounting linkage **87** includes a first pair of leg-rest mounting links **88**, **90** and a second pair of leg-rest mounting links **92**, **94**. The leg-rest mounting link **88** has a pivotal mount **96** at one end on the seat and a pivotal connection **98** at the other end to the link **90**, with the link **90** having a pivotal connection **100** at its forward end, the pivotal connection **100** serves to pivotally mount the leg-rest extension section **34** on the main leg-rest section **32**. The link **92** has a pivotal mount **102** on the seat spaced from the pivotal mount **96** and has a pivotal connection **104** adjacent its other end to the link **94**, with the link **94** having a pivotal connection **106** at its forward end to the main leg-rest section **32** at a point spaced from the pivotal connection **100**. The link **92** has an integral extension projecting beyond the pivotal connection **104** which extension has a pivotal connection **108** to the link **90** to coordinate the respective link pairs **88**, **90** and **92**, **94**. As detailed in said patent, provision is made for rapidly turning the leg-rest extension section **34** into alignment with the main leg-rest section **32** during the initial part of the first movement phase by the provision of a connecting link or extension-actuating link **110** which has a pivotal connection **112** to the link **94** at a point spaced from the pivotal connection **106** and a pivotal connection **114** to the leg-rest extension section **34** at a point spaced from the pivotal connection and mount **100**. The link **94***a* defined between the pivotal connection **106**, **112** will be recognized as providing the driver link of a toggle linkage which is constrained to move in a rotary path about the pivotal connection **106** and produces an axial force along the line of action of the connecting link **110** such that the leg-rest extension section **34** moves into the in-line position relative to the main leg-rest section **32** in response to the rotary movement of the driver link **94***a* during the first part of the first movement phase. The rotary movement of the driver link **94***a* is such that the effective lever arm, which is the perpendicular distance from the line of action of the connecting link to the center of rotation **106** of the driver link **94***a* is less when the driver link **94***a* is in its final position at the end of the first movement phase than it is when the driver link **94***a* is in its initial position with the body-supporting means in the upright sitting position. For further principles of the construction of such toggle linkage mechanisms, reference may be made to said patent.

Leg-rest actuating means are operatively connected to the leg-rest mounting linkage **87** and to a link which is operable during the first movement phase for moving the leg-rest **30** to the elevated leg-supporting position during such first movement phase. The leg-rest actuating means includes an integral extension **48***a* of the front seat guiding link **48** which serves as an actuating arm, and an actuating link **116** which has a pivotal connection **118** to the actuating arm **48***a* and the pivotal connection **120** to the link **92** of the leg-rest mounting linkage **87**.

A typical sequence of operations will now be described to facilitate a more thorough understanding of the present invention:

When the chair occupant is seated in the chair and leans against the back-rest **26**, the back-rest **26** and seat **28** move through the first movement phase from the upright sitting position illustrated in FIGS. 1, 2, and 3 to the intermediate, tilted sitting position illustrated in FIG. 4, with the seat and back-rest being guided by the front seat guiding link **48** turning about the pivotal mount **50**, the rear back-rest guiding link **54** turning about the pivotal mount **56** and the constraining effect of the holding link **62**, it being appreciated that the carrier member **44** is locked against movement by the sequencing means **78**, **80**. Concurrent with the turning movement of the front seat guiding link **48** about the pivotal mount **50**, there is a corresponding movement of the integral extension **48***a* which in turn imparts a thrust **116** to the leg-rest mounting linkage **87** which swings the leg-rest **30** to the extended and elevated leg-supporting position, with the simultaneous turning of the leg-rest extension section **34** into an in-line position relative to the main leg-rest section **32**. As the end of the first movement phase is approached, the pin **86** contacts the hook member **80** to turn the same about the pivot **82** against the bias of the spring **84** which releases the carrier member for turning movement about the carrier pivot and conditions the chair for operation in its second movement phase. The end of the first

movement phase is established when the rear back-rest guiding link 54 contacts the carrier pivot 46 serving as a stop whereupon continued movement of the back-rest 26 will be a simple turning movement thereof about the back-rest pivotal connection 58.

By continued application of pressure against the back-rest 26, the chair occupant initiates the second movement phase during which the included angle between the back-rest 26 and the seat 28 is opened up at a rate determined by the design of the second movement control linkage. Throughout such second movement phase, the leg-rest 30 is maintained in its leg-rest supporting position, moving in a substantially fixed relationship relative to the seat 28 of the chair.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What I claim is:

1. A reclining chair of the multiple movement lounger type comprising a support, body-supporting means including a back-rest and a seat pivotally mounted on said back-rest at a seat pivot, a carrier member mounted on said support for turning movement about a carrier pivot, a front seat guiding link pivotally mounted on said carrier member at a front pivotal mount and pivotally connected to said seat at a front pivotal connection, a rear back-rest guiding link pivotally mounted on said support at a rear pivotal mount and pivotally connected to said back-rest at a rear pivotal connection spaced rearwardly of said seat pivot, a holding link pivotally connected to said back-rest at a holding pivotal connection spaced forwardly of said rear pivotal connection and said seat pivot, the portion of said back-rest between said rear pivotal connection and said holding pivotal connection defining a back-rest link, a second movement control linkage operatively connected to said support, said holding link and said carrier member, said carrier member remaining stationary during a first movement phase, said front seat guiding link and said rear back-rest guiding link turning about said front and rear pivotal mounts during said first movement phase to guide said body-supporting means from an upright sitting position into an intermediate, tilted sitting position with said holding link being effective to substantially maintain a prescribed angular relationship between said seat and back-rest during said first movement phase, means for blocking further turning movement of said rear back-rest guiding link about said rear pivotal mount at the end of said first movement phase and when said body-supporting means is in said intermediate, tilted sitting position, said rear pivotal connection serving as a stationary pivotal mount for said back-rest during a second movement phase wherein said body-supporting means moves from said intermediate, tilted sitting position to a fully reclined position, the turning movement of said carrier member about said carrier pivot and of said back-rest about said rear pivotal connection being coordinated by said second movement control linkage to open up the included angle between said seat and back-rest during said second movement phase.

2. A reclining chair according to claim 1 wherein said second movement control linkage includes a second movement lever pivotally mounted on said support at a lever pivot and having a pivotal connection to said holding link and a second movement connecting link pivotally connected to said second movement lever and to said carrier member.

3. A reclining chair of the multiple movement lounger type comprising a support, body-supporting means including a back-rest and a seat pivotally mounted on said back-rest at a seat pivot, a carrier member mounted on said support for turning movement about a carrier pivot, a front seat guiding link pivotally mounted on said carrier member at a front pivotal mount and pivotally connected to said seat at a front pivotal connection, a rear back-rest guiding link pivotally mounted on said support at a rear pivotal mount and pivotally connected to said back-rest at a rear pivotal connection spaced rearwardly of said seat pivot, a holding link pivotally connected to said back-rest at a holding pivotal connection spaced forwardly of said rear pivotal connection and said seat pivot, the portion of said back-rest between said rear pivotal connection and said holding pivotal connection defining a back-rest link, a second movement control linkage operatively connected to said support, said holding link and said carrier member, means for blocking said carrier member against turning movement about said carrier pivot at the start of a first movement phase wherein said body-supporting means is in an upright sitting position, said front seat guiding link and said rear back-rest guiding link turning about said front and rear pivotal mounts during said first movement phase to guide said body-supporting means into an intermediate, tilted sitting position with said holding link being effective to substantially maintain a prescribed angular relationship between said seat and back-rest during said first movement phase, means for blocking further turning movement of said rear back-rest guiding link about said rear pivotal mount at the end of said first movement phase and when said body-supporting means is in said intermediate, tilted sitting position, said rear pivotal connection serving as a stationary pivotal mount for said back-rest during a second movement phase wherein said body-supporting means moves from said intermediate, tilted sitting position to a fully reclined position, the turning movement of said carrier member about said carrier pivot and of said back-rest about said rear pivotal connection being coordinated by said second movement control linkage to open up the included angle between said seat and back-rest during said second movement phase.

4. A reclining chair of the multiple movement lounger type comprising a support, body-supporting means including a back-rest and a seat pivotally mounted on said back-rest at a seat pivot, a carrier member mounted on said support for turning movement about a carrier pivot, a front seat guiding link pivotally mounted on said carrier member at a front pivotal mount and pivotally connected to said seat at a front pivotal connection, a rear back-rest guiding link pivotally mounted on said support at a rear pivotal mount and pivotally connected to said back-rest at a rear pivotal connection spaced rearwardly of said seat pivot, a holding link pivotally connected to said back-rest at a holding pivotal connection spaced forwardly of said rear pivotal connection and said seat pivot, the portion of said back-rest between said rear pivotal connection and said holding pivotal connection defining a back-rest link, a second movement control linkage operatively connected to said support, said holding link and said carrier member, said carrier member remaining stationary during a first movement phase, said front seat guiding link and said rear back-rest guiding link turning about said front and rear pivotal mounts during said first movement phase to guide said body-supporting means from an upright sitting position into an intermediate, tilted sitting position with said holding link being effective to substantially maintain a prescribed angular relationship between said seat and back-rest during said first movement phase, means for blocking further turning movement of said rear back-rest guiding link about said rear pivotal mount at the end of said first movement phase and when said body-supporting means is in said intermediate, tilted sitting position, said rear pivotal connection serving as a stationary pivotal mount for said back-rest during a second movement phase wherein said body-supporting means moves from said intermediate, tilted sitting position to a fully

reclined position, the turning movement of said carrier member about said carrier pivot and of said back-rest about said rear pivotal connection being coordinated by said second movement control linkage to open up the included angle between said seat and back-rest during said second movement phase, a leg-rest, a leg-rest mounting linkage operatively connected to said leg-rest and suspended from said seat for mounting said leg-rest for movement from a stored position when said body-supporting means is in said upright sitting position to an extending and elevated leg-supporting position when said body-supporting means is in said intermediate, tilted sitting position, and leg-rest actuating means operatively connected to said leg-rest mounting linkage and to a link which is operable during said first movement phase for moving said leg-rest to said elevated leg-supporting position during said first movement phase.

5. A reclining chair according to claim 4 wherein said leg-rest actuating means includes an integral extension of said front seat guiding link and an actuating link connecting said extension to said leg-rest mounting linkage.

6. A reclining chair according to claim 5 wherein said second movement control linkage includes a second movement lever pivotally mounted on said support at a lever pivot and having a pivotal connection to said holding link and a second movement connecting link pivotally connected to said second movement lever and to said carrier member.

7. A reclining chair of the multiple movement lounger type comprising a support, body-supporting means including a back-rest and a seat pivotally mounted on said back-rest at a seat pivot, a carrier member mounted on said support for turning movement about a carrier pivot, a front seat guiding link pivotally mounted on said carrier member at a front pivotal mount and pivotally connected to said seat at a front pivotal connection, a rear back-rest guiding link pivotally mounted on said support at a rear pivotal mount and pivotally connected to said back-rest at a rear pivotal connection spaced rearwardly of said seat pivot, a holding link pivotally connected to said back-rest at a holding pivotal connection spaced forwardly of said rear pivotal connection and said seat pivot, the portion of said back-rest between said rear pivotal connection and said holding pivotal connection defining a back-rest mounting link, a second movement control linkage operatively connected to said support, said holding link and said carrier member, means for blocking said carrier member against turning movement about said carrier pivot at the start of a first movement phase wherein said body-supporting means is in an upright sitting position, said front seat guiding link and said rear back-rest guiding link turning about said front and rear pivotal mounts during said first movement phase to guide said body-supporting means into an intermediate, tilted sitting position with said holding link being effective to substantially maintain a prescribed angular relationship between said seat and back-rest during said first movement phase, means for blocking further turning movement of said rear back-rest guiding link about said rear pivotal mount at the end of said first movement phase and when said body-supporting means is in said intermediate, tilted sitting position, said rear pivotal connection serving as a stationary pivotal mount for said back-rest during a second movement phase wherein said body-supporting means moves from said intermediate, tilted sitting position, to a fully reclined position, the turning movement of said carrier member about said carrier pivot and of said back-rest about said rear pivotal connection being coordinated by said second movement control linkage to open up the included angle between said seat and back-rest during said second movement phase, a leg-rest, a leg-rest mounting linkage operatively connected to said leg-rest and suspended from said seat for mounting said leg-rest for movement from a stored position when said body-supporting means is in said upright sitting position to an extended and elevated leg-supporting position when said body-supporting means is in said intermediate, tilted sitting position, and leg-rest actuating means operatively connected to said leg-rest mounting linkage and to a link which is operable during said first movement phase for moving said leg-rest to said elevated leg-supporting position during said first movement phase.

8. A reclining chair according to claim 7 wherein said leg-rest includes a main section arranged to serve as a filler beneath the forward end of said seat when in said stored position and an extension section extending substantially at right angles to said main section and rearwardly of said main section beneath said seat when in said stored position, means pivotally mounting said extension section on said main section at a mounting pivot, said leg-rest mounting linkage being operative during said first movement phase to move said main and extension sections into alignment with each other, said leg-rest mounting linkage including at least a first mounting link pivotally connected to said main section at a first leg-rest pivot spaced from said mounting pivot, a second mounting link pivotally connected to said sections coaxially with said mounting pivot, and an extension-actuating link pivotally connected to said first mounting link at a point spaced from said first leg-rest pivot and to said extension section at a second leg-rest pivot spaced from said mounting pivot.

9. A reclining chair according to claim 8 wherein said leg-rest mounting linkage includes a double four-bar linkage suspended from said seat and operatively connected to said leg-rest.

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