

July 17, 1962

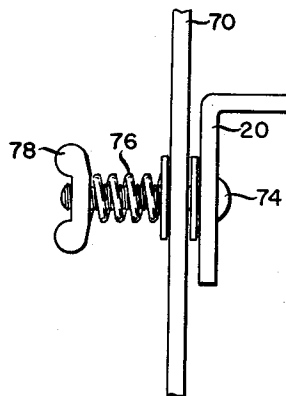
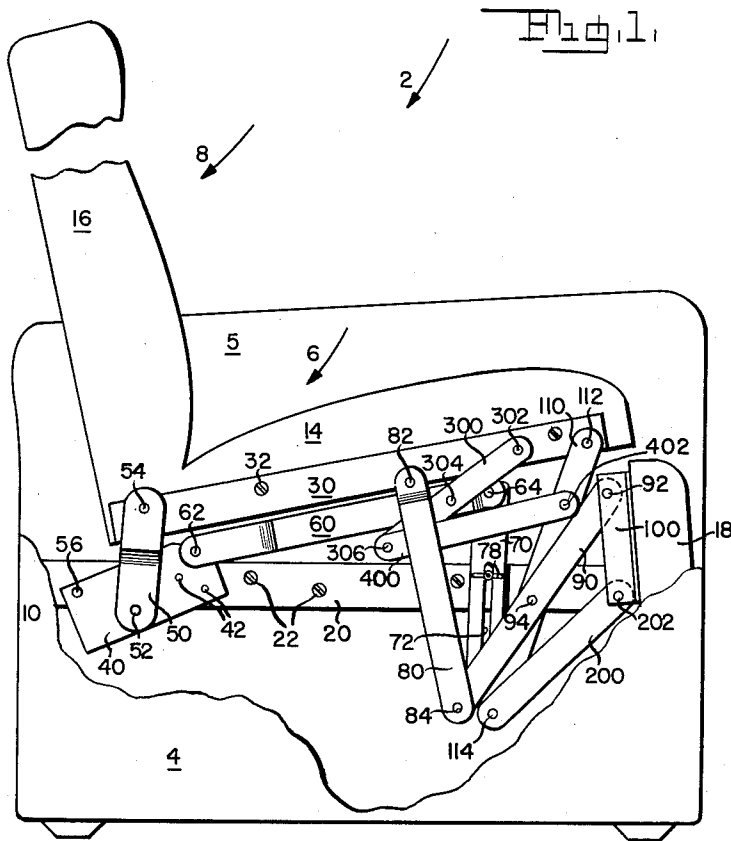
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3,044,827

RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST

Filed April 25, 1960

5 Sheets-Sheet 1



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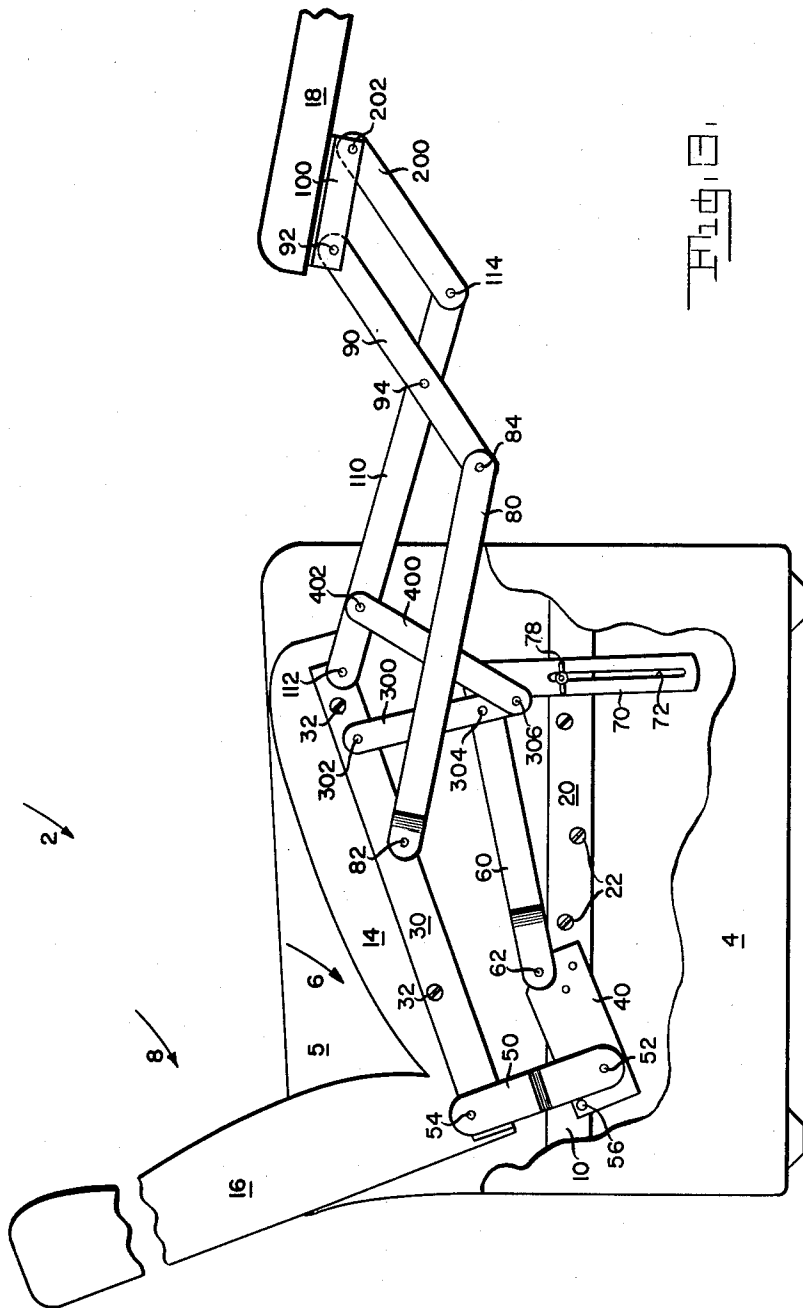
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RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST

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5 Sheets-Sheet 2



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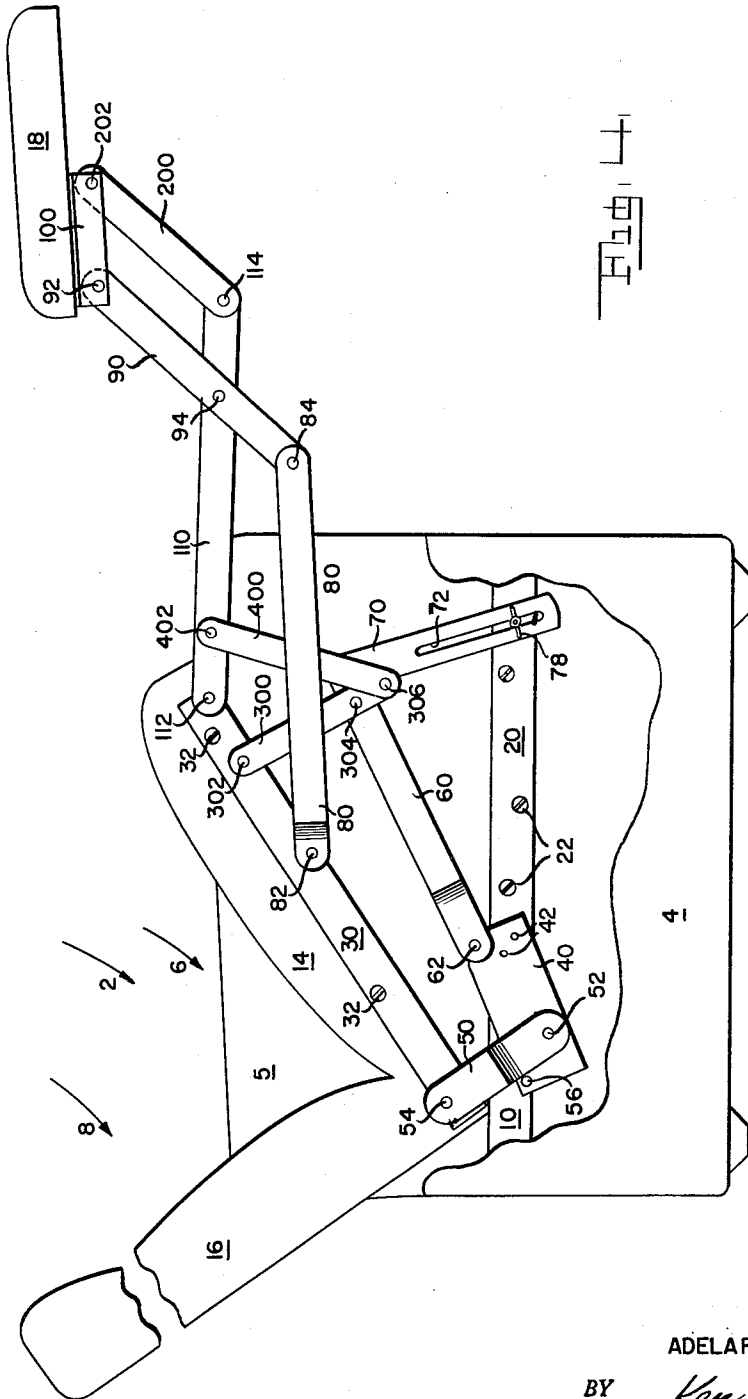
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RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST

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5 Sheets-Sheet 3



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RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST

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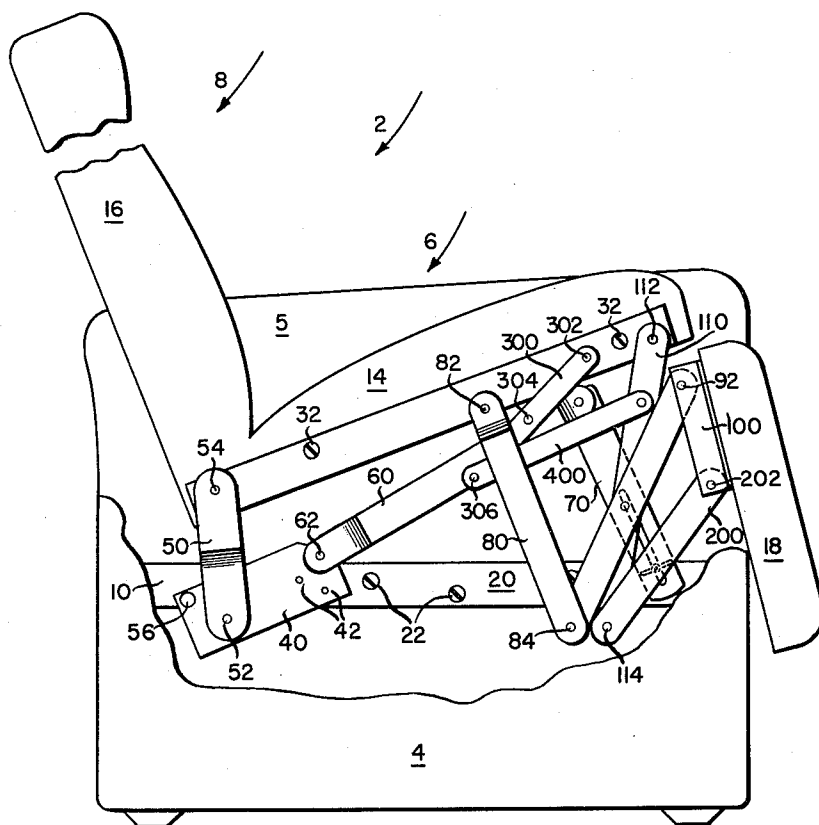


Fig. 5.

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RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST

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5 Sheets-Sheet 5

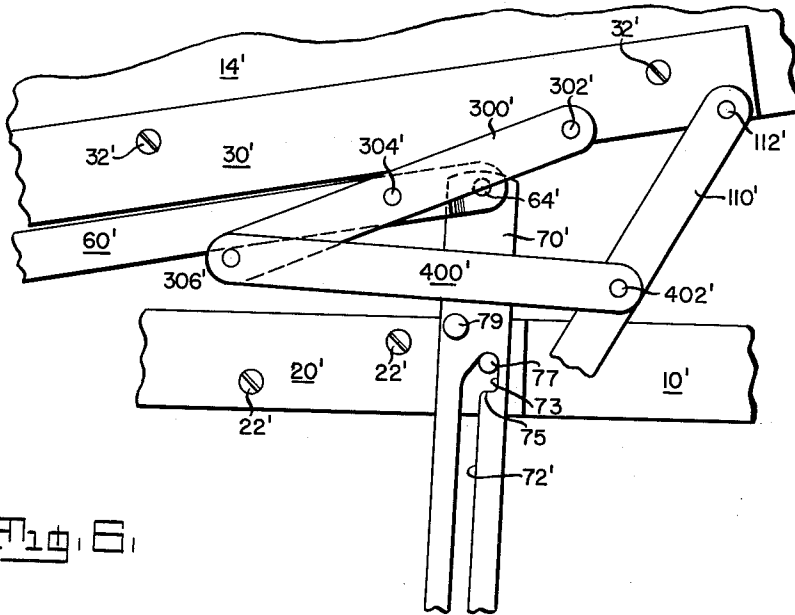


Fig. 6

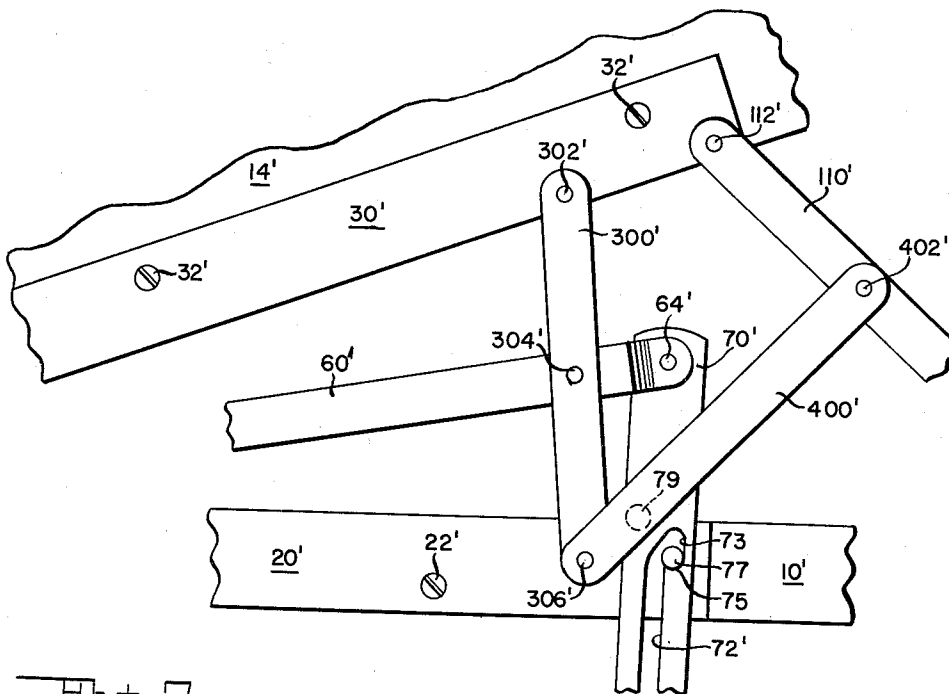


Fig. 7

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3,044,827

**RECLINING ARTICLE OF FURNITURE HAVING
MOVABLE LEG REST**

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11 Claims. (Cl. 297-89)

The present invention relates to new and useful improvements in structural refinements in reclining chairs and is directed particularly to a reclining chair having a unitary seat and back-rest and a leg-rest, which components may be shiftable between a sitting position and a plurality of reclined positions relative to a support or chassis and in coordinated movements relative to each other.

The invention envisions an article of furniture or seating unit adjustable from a regular sitting position to one of a plurality of more or less reclining or tilted positions. In particular, it relates to such an article provided with a leg rest which occupies an inoperative position when the seating element is in a position to support the body in an upright sitting posture and which is advanced and raised so as to support the legs when the seating element is moved to one of several reclining positions, identified as intermediate reclining positions where the chair occupant is accommodated in partially reclining or resting attitudes and as a fully reclined position where the chair occupant is accommodated in a fully reclined or resting attitude.

The seating element comprises a unitary back rest and seat, which element may be mounted in a swingable manner upon a base resting on the floor, so that the back rest when it is tilted backward will tilt the seat upward at its forward edge. The leg rest is pivoted to the front part of the seat and a linkage is provided which raises the leg rest when the unitary back rest and seat is tilted. Such linkage may be operated to raise the leg rest by means of a connection to the back rest or to the tilting seat and to the fixed base so that the tilting of the seat provides the power for raising the leg rest.

Chairs have been heretofore designed to provide a semi-reclined or tilted position for the chair occupant with the leg rest elevated in front of the unitary seat and back-rest (body supporting unit), which semi-reclined or tilted position is suitable for reading, television viewing, and the like. Other chairs are known which are designed to provide a fully reclined or completely relaxed position for the chair occupant with the body supporting unit disposed angularly relative to the horizontal upon which plane the chassis may be disposed for the complete or total relaxation of the occupant with his feet disposed upon the elevated leg rest forwardly of the body supporting unit.

The invention contemplates a novel article of furniture having multiple coacting parts which are relatively spaced on and swingable relative to a suitable support means whereby the components may be actuated by the occupant with facility so as to move same between a normal upright or sitting position and one of a multiplicity of reclining positions. In assuming the reclined position, a fixed back and seat is swingable relative to a support to effect the angularization of said seat and back and simultaneously to bring about the swinging or shifting of the leg-rest relative to the angularization of the combined seat and back, and further to permit the adjustment of the leg-rest component independent of the relative positioning of the other components.

In addition, the invention envisions a reclining article of furniture wherein the various coacting components above defined may be combined with a suitable sliding device whereby the chair may further be angularized from

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a semi-reclined to a fully reclined position simply by the application of increased body pressure by the occupant upon the chair back.

In a broad way, the invention may be defined as an improved reclining chair for reading, television viewing, and the like as well as for relaxing totally and completely, different positions being attainable for each. In one position, an intermediate semi-reclined or tilted position, the body supporting unit is disposed at an angle relative to the horizontal plane with the leg rest elevated in front of the body supporting unit to a degree suitable for the attaining of partial relaxation. In the other position, a fully reclined position, the body supporting unit is disposed at a different angle relative to the said horizontal plane with the leg rest in an extremely elevated position in front of the body supporting unit suitable for the attaining of total or complete relaxation.

In prior art constructions involving a leg rest and a linkage for raising same, the links and levers employed have extended a considerable distance below the plane of the seat and frequently very close to the floor level, and have necessitated the use of a stationary base closed in practically to the floor in order to conceal the linkage from view. Herein the leg rest operating linkage is located close to the plane of and below the seat and relatively far above the floor to permit the chair to be built with a so-called open base.

It is a particular object of the present invention to provide a leg rest which, when the chair is in upright sitting position, is completely retracted where it is substantially hidden from view and in which the leg rest carrying linkage is folded up along the sides of the seat. The mechanism is essentially concealed by the side members of the chair frame so that a clean-looking construction is presented which has the appearance of an ordinary chair.

It is another object hereof to provide a novel reclining chair wherein an integral seat and back rest may be angularized to the reclined position respective to a base or chassis without necessarily extending the leg-rest. It is contemplated either that movement of the unitary seat and back rest may be accomplished independently of outward lateral movement of the leg-rest, or that the movement of the seat and back rest may be accomplished synchronously with the movement of the leg-rest, all at the option of the chair occupant.

It is still another object hereof to provide a reclining chair wherein the various components may be returned from their relative positions in the fully extended or reclined position to their relative positions in the so-called normal upright position along routes or paths of movement which are different from the routes or paths of movement taken as the seat and back rest are moved from normal upright or sitting position to the semi-reclined and fully reclined positions and as the leg-rest is moved away from its normal vertical inoperative position to its various operative positions.

The resultant effect is an improvement over known prior art devices wherein the components of the mechanism effectuating the extension of the leg-rest and the angularization of the seat and back rest are returned to normal position through the same paths or routes followed in achieving such reclined, extended position.

Additionally, the components hereof are maintained in balanced relationship at all times wherein a fluidity of maneuverability of the movable body and leg supporting members is attained with a minimum of effort and a maximum of ease.

One salient feature hereof resides in the fact that the occupant may obtain variations in angularization of the seat and back rest or of the position of the leg-rest by a

slight shifting of the body weight of the occupant and, in some instances, by a slight downward pressure of the heels upon the leg-rest.

As a further refinement, the operating elements hereof may be adapted to engage an interlocking device, whereby the unitary seat and back rest may be locked in the semi-reclined position and the leg-rest may be locked in the extended position, which interlocking device may be released by a slight shifting of the occupant's weight to allow the seat and back rest to be further angularized to the fully reclined position.

The linkage mechanism hereof permits the body supporting unit to be moved into the partially reclined or intermediate resting position with the raising of the leg-rest to the required elevated leg-supporting position, followed by the movement of the body-supporting unit and the leg-rest as a substantially unitary assembly into a suitable fully reclined position, and if desired, followed by the retention of the body-supporting unit in the fully reclined position and the return of the leg-rest to its normal vertical position before the return of the body-supporting unit to its normal upright position, or if desired, followed by the return in unison of the body-supporting unit and the leg-rest to their respective normal upright positions.

In the accompanying drawings, I have illustrated a chair wherein the various components are combined and coact in accordance with the principles toward which I have directed my invention. It will be understood, however, that various changes and alterations are envisioned and may be such as to modify the structures illustrated herein but yet remain within the scope and spirit of the claims appended hereto.

In the drawings:

FIG. 1 is a side elevational view of the preferred embodiment of my invention with the various components thereof in the upright sitting position, portions of the rear side wall of the chair being broken away to better disclose the details of the adjacent operating mechanism;

FIG. 2 is an enlarged top plan view of the slide control means of the invention;

FIG. 3 is a side elevational view, with portions broken away, showing the chair of FIG. 1, and illustrating the positions of the rigid seat and back-rest and the leg-rest in the semi-reclined position;

FIG. 4 is a side elevational view, with portions broken away, illustrating the chair of FIG. 1, and showing the positions of the rigid seat and back-rest and the leg-rest in the fully reclined position;

FIG. 5 is a side elevational view, with portions broken away, illustrating the chair of FIG. 1, and showing the positions of the rigid seat and back-rest and the leg-rest when the leg-rest has been returned to its normal vertical position and before the return of the rigid seat and back-rest to its normal upright sitting position;

FIG. 6 is a large scale fragmentary side elevational view of certain of the operating elements of the chair of FIG. 1 which have been modified to provide a locking and inter-locking device; and

FIG. 7 is a large-scale fragmentary side elevational view of certain of the operating elements shown in FIG. 6, showing the relative position of same when the unitary seat and back-rest is in the reclined position and the leg-rest is in the extended position.

Referring now to the drawings more in detail, the basic chair structure will first be described. I have illustrated a simplified version of a chair, generally designated by the numerical 2, and consisting of a pair of transversely-spaced, parallel, vertically-extending side wall members 4 and 5 rigidly connected together as by a plurality of transverse members (not shown).

A seat, generally designated by 6, is rigid with a back-rest, generally designated by 8, and the unitary structure is disposed between side wall members 4 and 5, as is conventional.

The unitary back-rest and seat may consist of a framework comprising the usual spaced parallel side rail members, represented by 14 in the case of the seat and by 16 in the case of the back-rest, and a plurality of transverse or connecting rail members (not shown) therebetween at appropriate intervals.

A leg-rest member 18 is disposed substantially flush against the forward end of the base of the chair and somewhat below the horizontal plane of the seat when the chair is in the fully upright position.

The leg-rest is comprised of a pair of spaced side rails (not shown) connected together by spaced transverse cross rails (not shown).

It will of course be understood that the aforementioned chair components may be made of wood, metal or equivalent materials and may be suitably padded or upholstered, as desired.

The operating mechanism or linkage system will now be explained. Throughout the several views and the specification, only one of such linkage systems will be shown and/or described, all for purposes of simplification. It will be apparent, however, that duplicate linkage systems may be readily employed on opposite sides of the structures hereof, which systems may operate in unison.

An elongated L-shaped chassis or base rail member 20 may be secured to the bottom and a side of a longitudinal chair base member 10 as by screws or bolts 22.

An elongated L-shaped seat rail member 30 may be fixed to the bottom and a side of rail 14 of seat 6 as by screws or bolts 32.

A mounting plate 40 is fixed to base rail member 20 adjacent the rearward extremity thereof as by rivets 42 or the like.

A primary pivot link 50 is pivotally mounted on mounting plate 40 and to the rearward extremity of seat rail member 30 as by pivot pins 52 and 54 respectively.

A stop member 56 may be fixed to mounting plate 40 in manner to extend outwardly therefrom and transversely relative thereto so as to prevent movement of member 50, and hence the entire linkage mechanism, beyond a predetermined limit when the chair elements assume the fully reclined position. See FIG. 3.

A primary lifter link 60 has a rearward end swingably connected at 62 to the upper edge of mounting plate 40 and is also pivotally connected at 64, adjacent its forward end, to the upper end of a slidable lifter lever 70.

A slot 72 is provided centrally of lever 70, through which slot a bolt 74 may be extended, said bolt being fixed to member 20. A tension spring 76 and an adjusting nut 78 are disposed upon bolt 74 with said spring embracing the face of lever 70 to the end that lever 70 may be vertically reciprocated relative to bolt 74, with the nut 78 being tightenable against the spring 76 to increase the frictional engagement between said lever 70 and base rail member 20. Conversely, by loosening nut 78, the frictional engagement between lever 70 and base rail member 20 may be decreased, this being desirable in the case of persons of light weight in that the device may be adjusted for easier operation.

Nut 78 and spring 76, in combination with slotted lever 70, function as an adjustable braking or frictional device whereby the force or weight required to move the seat and back-rest to one of the reclining positions may be varied in accordance with the requirements of the chair occupant, with the force or pressure required to move those components being directly related to the pressure of slotted lever 70 upon base rail member 20, same being increased or decreased by the rotation of wing nut 78 relative to bolt 74.

A primary propeller link 80 has an upper end portion swingably connected at 82 to member 30. Link 80 is also pivotally connected at 84, adjacent its lower end, to the lower end of a primary elevator link 90.

The upper end of primary elevator link 90 is swingably connected at 92 to a leg-rest link 100 fixed to leg-rest 18.

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Primary elevator link 90 is also pivotally connected at 94, intermediate its opposite ends, and at a point remote from connections 84 and 92, to a secondary propeller link 110, the upper end of said secondary propeller link being swingably mounted at 112 to member 30, immediately adjacent the forward extremity thereof. Secondary propeller link 110 is also swingably connected at 114, adjacent its lower end, to the lower end of a secondary elevator link 200 swingably connected at 202 to the lower extremity of leg-rest link 100.

A primary control link 300 is pivotally connected at 302, adjacent its upper end, to member 30 rearwardly of pivotal connection 112, and at 304 to primary lifter lever 60, adjacent the forward end thereof. Link 300 is also pivotally connected at 306, adjacent its lower end, to the rearward extremity of a secondary control link 400, which link 400 is swingably connected at 402, adjacent its forward end, to the secondary propeller link 110 intermediate the pivotal connections 112 and 114.

By virtue of this recited linkage, the unitary seat and back-rest and the leg-rest members are caused to coact as the mechanism is operated.

The chair components may be moved from the upright or sitting position, shown in FIG. 1, to a semi-reclined position, shown in FIG. 3, by the chair occupant bringing his weight to bear against the back-rest of the unitary seat and back-rest.

In shifting from one position to the other, the members 80, 110 and 300 are swung upwardly and forwardly as member 30 is raised upwardly, while the link 50 pivots on the pin 52 to cause the stop 56 of the member 40 to be brought to bear against said member 50.

As link 80 rotates, it pushes link 90 forwardly and upwardly which in turn simultaneously drives link 110 forwardly and upwardly in a similar rotative movement so as to bring about the forward and upward movement of link 200.

During the movement of the components of the linkage mechanism above recited, the link 300 has pivoted on the member 60 at 304 to effect a forward and upward swinging motion in link 400, which has a forward end pivoted to the link 110.

Thus, said link 110 is impelled forwardly and upwardly, not only through its pivotal connection with the member 90, but also through its connection with link 400.

During the cycle just described, the fixed seat and back have been angularized to the semi-reclined position and the leg-rest has been fully extended to the position shown in FIG. 3.

Thus it will be observed that the body-supporting unit is movably or rockably mounted on the base at the primary pivot link 50 which is pivotally on the mounting plate 40 as by pivot pin 52 which pivots it to the said mounting plate and as by pivot pin 54 which pivots it to the seat rail member 30 wherefor the body-supporting unit is shiftable from the upright or sitting position of FIG. 1 to the intermediate tilted or resting position of FIG. 3.

It will be noted in FIG. 3 that, in the semi-reclined position, the link 60 and the slidable slotted member 70 have not changed their positions during this outward and upward movement of the other recited components of the linkage mechanism.

To achieve the fully reclined position shown in FIG. 4 from the semi-reclined position of FIG. 3, the chair occupant need only exert a slight pressure upon the back-rest 8, which imparts a continued upward movement to the seat 6. Control link 300, being connected to member 60 at 304, imparts a corresponding upward movement to member 60 causing the member 70 so slide upwardly relative to bolt 74.

The occupant may return the chair from the fully reclined position of FIG. 4 to the semi-upright position of FIG. 5 by exerting a slight downward pressure of the heels upon leg-rest 18.

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It will be noted, in FIG. 5, that link 60 and slotted member 70 remain in their raised positions, while the other components of the linkage system are moved into their collapsed positions. It will also be noted that seat 6 embraces the upper surface of member 60. By exerting a slight downward pressure upon said seat 6, the occupant imparts a corresponding downward pressure upon member 60 to cause slotted member 70 to slide easily downwardly on bolt 74, whereupon the chair is returned to the fully upright sitting position of FIG. 1.

It will also be noted that the components return to the fully upright position of FIG. 1 along paths or routes different from those taken to achieve the fully reclined position of FIG. 4.

In FIGS. 6 and 7, the operating elements of the chair of FIG. 1 are shown as being modified by the provision of a novel interlocking means wherein certain of the elements shown correspond to those shown in FIG. 1. Certain of the operating components have been omitted herefrom for the purposes of clarity.

It will be understood that the interlocking device shown is but one of a variety of interlocking means which may be employed, although the form illustrated and herein described represents a preferred embodiment.

FIG. 6 illustrates the relative positions of the actuating components when the chair is in the fully upright, sitting position, while FIG. 7 shows the positions of these same components when the unitary seat and back is in the semi-reclined position and the leg-rest is extended.

The elements shown in FIGS. 6 and 7 are identical in all respects to the embodiments illustrated in FIG. 1, with the exception that the slotted member 70 of FIG. 1 has been modified to accommodate the aforementioned interlocking device and the slide control means shown in large scale in FIG. 2 has been omitted.

Accordingly, the corresponding parts have been designated by the same reference numerals as in FIGS. 1-5, inclusive, but with each part so numbered being primed.

In this embodiment, member 70' is provided with a slot 72', the upper extremity of which is enlarged to form an arbor 73. This arbor is provided with a seat 75 of appropriate size to engage a pin 77 which extends outwardly from base rail member 20' adjacent the forward end thereof. Immediately above arbor 73 and extending outwardly from the member 70', a pin 79 is provided. The upper extremity of arbor 73 is curved to accommodate pin 77 while the rear wall of said arbor extends angularly downwardly from said upper extremity to meet the slot 72'.

In assuming the position of FIG. 7, the chair occupant will have caused the unitary seat and back to be angularized to the semi-reclined position, whereby member 70' will have been raised, due to its pivotal connection at 64' to link 60'. The outwardly extending pin 77 now rests on seat 75 of arbor 73, thereby locking the unitary seat and back and the leg-rest in the semi-reclined position.

If the occupant desires to reach the fully reclined position, pressure is exerted against the seat back thereby causing link 300' to swing in a counter clockwise direction to contact pin 79 which extends outwardly from member 70', whereupon member 70' is urged forwardly thereby enabling pin 77 to become aligned with elongated slot 72'. The chair may now be further angularized to the fully reclined position with the member 70' moving upwardly relative to pin 77.

Without further analysis, the foregoing is intended to so fully reveal the gist of my invention and the construction and operation of the device thereof that others can, by applying current knowledge, readily adapt it for various applications without omitting features which, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention.

The following claims are desired to include within the

scope of the invention all such suitable variations, modifications and equivalents by which substantially the results of the invention may be obtained through the use of substantially the same or equivalent devices or means.

Accordingly, limitation of this invention should be made only as determined by a proper interpretation of the terms used in the subjoined claims.

Having thus described the invention, what is claimed as new and novel and is desired to be secured by Letters Patent is:

1. A reclining article of furniture comprising: a stationary frame; a unitary seat and back rest; means for mounting said unitary seat and back rest on said frame permitting tilting movement thereof with respect to said frame; a leg-rest; a system of linkage for supporting said leg-rest from said unitary seat and back rest and causing movement thereof from a retracted position adjacent the seat of said unitary seat and back rest to a projected position with said unitary seat and back rest being tilted and permitting movement of said leg-rest between the retracted and projected positions while said unitary seat and back rest remain tilted; said system of linkage including, a base rail fixed to said frame, a seat rail fixed to the seat of said unitary seat and back rest, a mounting plate fixed to said base rail, a primary pivot link pivotally mounted on said mounting plate and on said seat rail, a primary lifter link pivotally connected to said mounting plate, a slotted slidable lifter lever pivotally connected to said primary lifter link, an adjustable braking means for controlling the movement of said lifter lever and consisting of a base rail bolt extendable through the slot of said lifter lever and fixed to said base rail member and a tension spring and an adjusting base rail nut engageable with the base rail bolt, the frictional engagement of said lifter lever with said base rail member being variable by the rotation of said base rail nut relative to said base rail bolt, a primary propeller link pivotally connected to said seat rail, a primary elevator link pivotally connected to said primary propeller link and to said leg-rest, a secondary propeller link pivotally connected to said primary elevator link and to said seat rail, a secondary elevator link pivotally connected to said secondary propeller link and to said leg-rest, a primary control link pivotally connected to said seat rail and to said primary lifter lever, and a secondary control link pivotally connected to said primary control link and said secondary propeller link with said systems of linkage having a capacity for holding said leg-rest adjacent the seat of said unitary seat and back rest in upright sitting position and for holding said leg-rest projected forwardly thereof in any reclining position thereof with said primary and secondary control links and said adjustable braking means permitting retraction of said leg-rest while said unitary seat and back rest remains in a tilted position.

2. In a reclining chair: a support; a body-supporting unit including a unitary seat and back rest; means mounting said body-supporting unit for partial rotative movement about an axis relative to said support into a sitting position and a multiplicity of intermediate reclined positions and a fully reclined position; a leg-rest; a control linkage including coacting interconnected links movable relative to each other in response to movement of said body-supporting unit and permitting a retraction of said leg-rest with said body-supporting unit in a reclined position and including, a base rail fixed to said support, a seat rail fixed to the seat of said body-supporting unit, a mounting plate fixed to said base rail, a primary pivot link pivotally mounted on said mounting plate and on said seat rail, a primary lifter link pivotally connected to said mounting plate, a slotted slidable lifter lever pivotally connected to said primary lifter link, adjustable braking means for controlling the frictional engagement between said lifter lever and base rail and the force for moving said lifter lever a primary propeller link pivotally connected to said seat rail, a primary elevator link pivotally

connected to said primary propeller link and to the leg-rest of said body-supporting unit, a secondary propeller link pivotally connected to said primary elevator link and to said seat rail, a secondary elevator link pivotally connected to said secondary propeller link and to the leg-rest of said body-supporting unit, a primary control link pivotally connected to said seat rail and to said primary lifter lever, and a secondary control link pivotally connected to said primary control link and secondary propeller link with the leg-rest of said body-supporting unit being held adjacent the seat of said body-supporting unit in upright sitting position and being held projected forwardly thereof in intermediate resting and fully reclined positions and with said primary and secondary control links and adjustable braking means permitting the retraction of the leg-rest of said body-supporting unit while said body-supporting unit remains in a reclined position.

3. A reclining chair comprising: a support; a body-supporting unit including a unitary seat and back rest; means mounting said body-supporting unit for movement into and out of sitting and a plurality of intermediate reclining and fully reclined positions; a leg-rest; and a control linkage of coacting links movable relative to each other in response to movement of said body-supporting unit and permitting a retraction of said leg-rest while said body-supporting unit remains in a reclined position and including, a base rail link fixed to said support, a seat rail link fixed to the seat of said body-supporting unit, a primary pivot link pivotally mounted on said base and seat rail links, a primary lifter link pivotally connected to said base rail link, a slotted slidable lifter lever pivotally connected to said primary lifter link and being displaceable relative to said support, adjustable friction means fixed to said base rail link and extendable through the slot of said lifter lever for controlling the force required to move said unitary seat and back rest to the fully reclined position, a primary propeller link pivotally connected to said seat rail link, a primary elevator link pivotally connected to said primary propeller link and to said leg-rest for elevating said leg-rest into a leg-supporting position in response to movement of the links of said control linkage relative to each other as said body-supporting unit moves into one of the plurality of reclining positions, a secondary propeller link pivotally connected to said primary elevator link and to said seat rail link, a secondary elevator link pivotally connected to said secondary propeller link and to said leg-rest, a primary control link pivotally connected to said seat link and to said primary lifter lever, and a secondary control link pivotally connected to said primary control link and to said secondary propeller link with said control linkage holding said leg-rest adjacent said seat in upright sitting position and holding said leg-rest projected forwardly thereof in reclining position and with said adjusting means and said primary and secondary control links permitting the retraction of said leg-rest while said unitary seat and back rest remains reclined.

4. A reclining article of furniture comprising: a stationary frame; a unitary seat and back rest; means pivotally mounting said unitary seat and back rest on said frame permitting tilting movement thereof with respect to said frame; a leg-rest; operating means for supporting said leg-rest relative to said unitary seat and back rest and inducing movement thereof from a retracted position as said unitary seat and back rest is tilted and permitting movement of said leg-rest from projected to retracted position and positions therebetween while said unitary seat and back rest remains tilted and including, primary lifter means pivotally connected to said frame, a lifter lever slidable relative to said frame and pivotally connected to said primary lifter means, an adjustable brake for controlling movement of said lifter lever, a primary propeller link and a primary elevator link pivotally interconnecting said leg-rest and unitary seat and back rest, a secondary propeller link and a secondary elevator link pivotally interconnecting said leg-rest and said unitary seat and back rest, said secondary

propeller link being pivotally connected to said primary elevator link, a primary control link pivotally interconnecting said primary lifter link and unitary seat and back rest, a secondary control link pivotally interconnecting said secondary propeller link and primary control link; said operating means being constructed and arranged for holding said leg-rest adjacent the seat of said unitary seat and back rest in upright sitting position and for holding said leg-rest projected forwardly thereof in the reclining positions with said primary and secondary control links and adjustable brake permitting a retraction of said leg-rest while said unitary seat and back rest remains in a tilted position.

5. A multiple position reclining chair comprising: a stationary frame; a unitary seat and back rest; means operatively connected to and mounting said unitary seat and back rest on said frame for pivotal movement between an upright sitting position and a multiplicity of intermediate tilted positions and a reclined position; primary lifter means movably mounted on said frame; a leg-rest; a leg-rest control linkage operatively connected to said primary lifter means and to said unitary seat and back rest and to said leg-rest for elevating said leg-rest from a retracted to a projected position as said unitary seat and back rest is moved from upright position; and means slidably connected to said frame and pivotally connected to said primary lifter means permitting movement of said unitary seat and back rest from an intermediate tilted position to reclined position, said leg-rest control linkage permitting movement of said leg-rest from the projected to retracted position before the return of said unitary seat and back rest to the upright position.

6. A multiple position reclining chair comprising: a frame; a body-supporting unit including a rigid seat and back rest; means operatively connected to and mounting said body-supporting unit on said frame for pivotal movement between an upright and a plurality of tilted positions and a reclined position; primary lifter means movably mounted on said frame; a leg-rest; a leg-rest control linkage operatively connected to said primary lifter means and to said body-supporting unit and to said leg-rest for elevating said leg-rest as said body-supporting unit is tilted; means slidably connected to said frame and pivotally connected to said primary lifter means for permitting movement of said body-supporting unit from a tilted to a reclined position; said leg-rest control linkage permitting free movement of said leg-rest while said body-supporting unit remains away from the upright position.

7. A multiple position reclining chair comprising: a frame; a body-supporting unit including a rigid seat and back rest; means operatively connected to and mounting said body-supporting unit on said frame for pivotal movement between upright and a multiplicity of intermediate and reclined positions; primary lifter means pivotally connected to said frame; a leg-rest movable between a non-operative retracted position adjacent said body-supporting unit and an operative extended position distantly of said body-supporting unit, a leg-rest control linkage operatively connected to said primary lifter means and to said body-supporting unit and to said leg-rest for moving said leg-rest from retracted to extended position as said body-supporting unit is moved from the upright to a

reclined position; adjustable slotted means slidably connected to said frame and pivotally connected to said primary lifter means for effectuating movement of said body-supporting unit between intermediate and reclined positions, said leg-rest control linkage permitting free movement of said leg-rest while said body-supporting unit remains away from the upright position.

8. In a multiple position reclining chair as set forth in claim 7 including, an adjustable brake for controlling the movement of said slotted means.

9. In a multiple position reclining chair as set forth in claim 7 wherein said leg-rest control linkage is operatively connected to the seat of said body-supporting unit.

10. A multiple position reclining chair comprising: A stationary frame; a unitary seat and back rest; means operatively connected to and mounting said unitary seat and back rest on said frame for selective pivotal movement between an upright sitting position and a multiplicity of intermediate tilted positions and a reclined position; primary lifter means movably mounted on said frame; a selectively controlled leg-rest; a leg-rest control linkage operatively connected to said primary lifter means and to said unitary seat and back rest and to said leg-rest for elevating said leg-rest from a retracted to a projected position concomitantly with the movement of said unitary seat and back rest from upright position; and means slidably connected to said frame and pivotally connected to said primary lifter means permitting movement of said unitary seat and back rest from an intermediate position to reclined position; said leg-rest control linkage allowing two degrees of freedom of movement to said leg-rest while said unitary seat and back rest remains away from upright position.

11. A multiple position reclining chair comprising: a frame; a body-supporting unit including a rigid seat and back rest; means operatively connected to and mounting said body-supporting unit on said frame for pivotal movement between upright and a multiplicity of intermediate and reclined positions; primary lifter means pivotally connected to said frame; a selectively controlled leg-rest; a leg-rest control linkage operatively connected to said primary lifter means and to said body-supporting unit and to said leg-rest for moving said leg-rest from retracted to extended position as said body-supporting unit is moved from the upright to a reclined position; adjustable slotted means slidably connected to said frame and pivotally connected to said primary lifter means for effectuating movement of said body-supporting unit between intermediate and reclined positions, said leg-rest control linkage permitting two degrees of freedom of said leg-rest while said body-supporting unit remains away from the upright position.

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