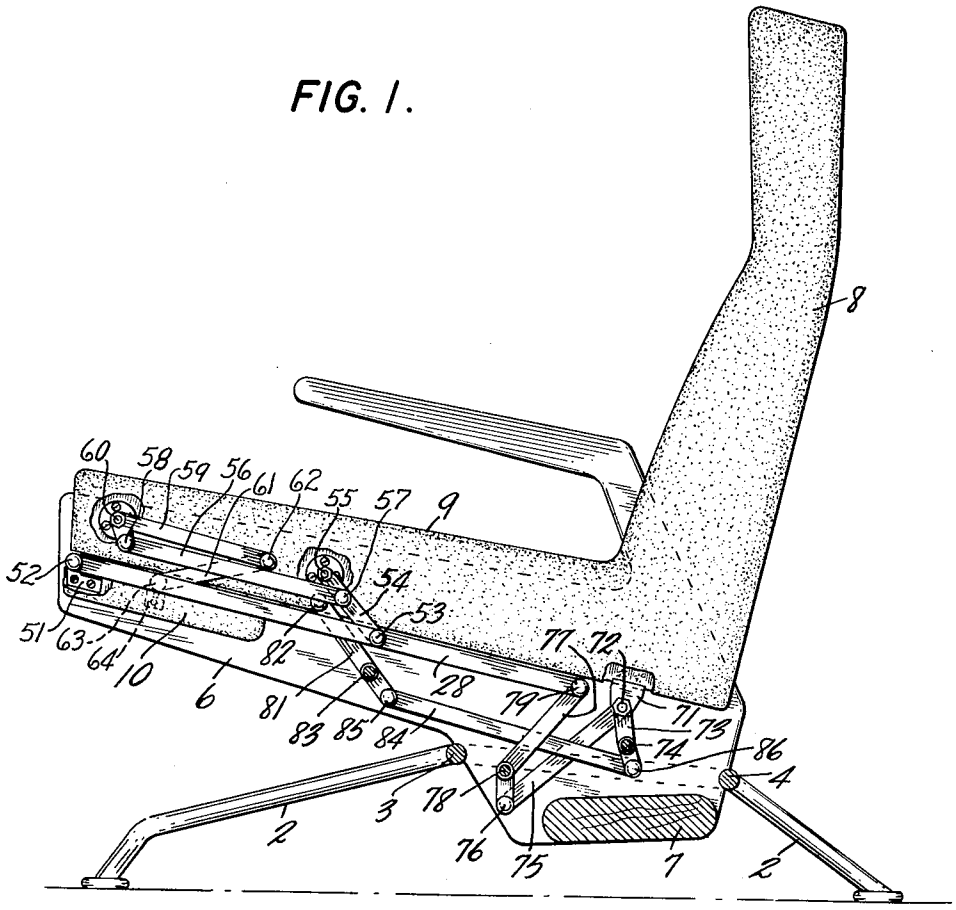
April 11, 1961 F. F. SCHLIEPHACKE 2,979,116

RECLINING CHAIRS

Original Filed June 18, 1957 3 Sheets-Sheet 1

FIG. 1.



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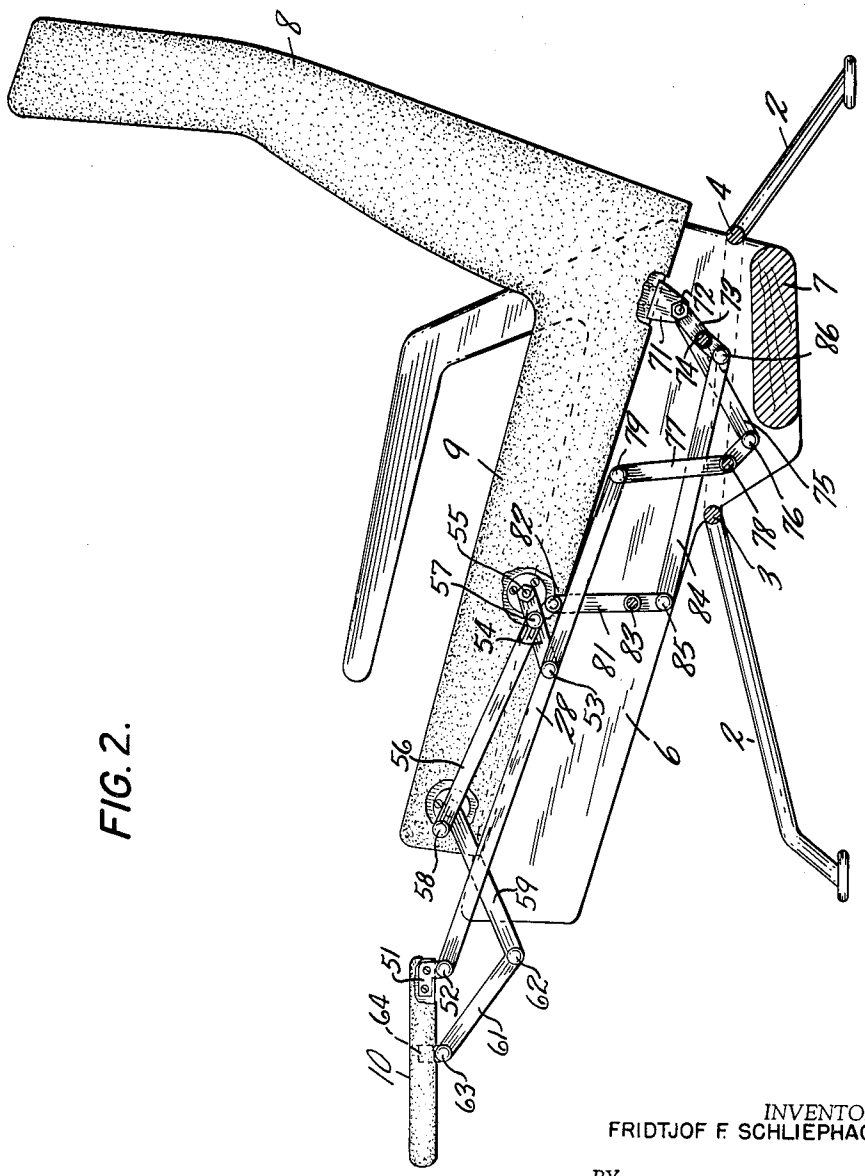


FIG. 2.

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RECLINING CHAIRS

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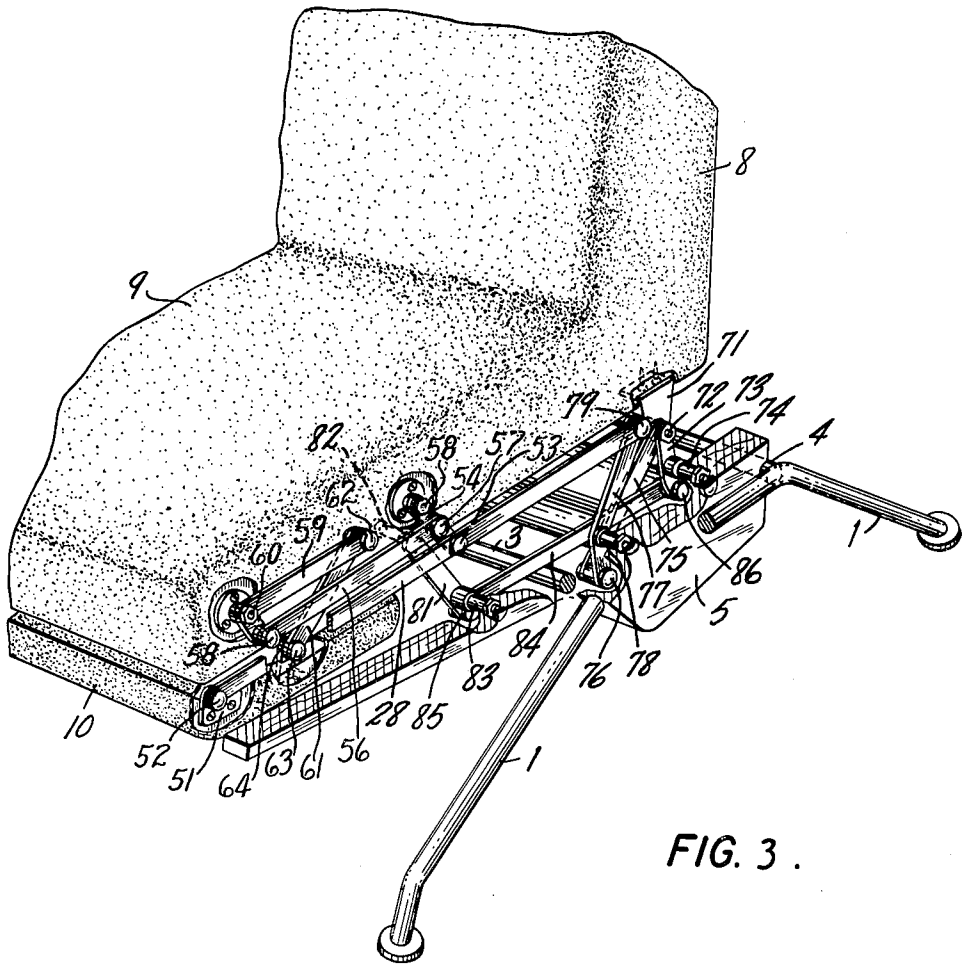


FIG. 3.

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2,979,116

RECLINING CHAIRS

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Original application June 18, 1957, Ser. No. 666,337, now Patent No. 2,875,814, dated Mar. 3, 1959. Divided and this application June 10, 1958, Ser. No. 741,039

5 Claims. (Cl. 155—106)

This invention relates to chairs and pertains particularly to reclining chairs having a backrest, a seat, and a leg rest, all supported on a base frame and movable with respect to said base frame and with respect to each other to assume a reclining position.

It is an object of the present invention to provide a reclining chair in which the backrest, seat and leg rest, when moved to reclining position, support the body of the occupant in a relaxed, comfortable position.

It is a further object of the present invention to provide a construction in which the operative connections between the parts of the chair are such as to permit a compact arrangement of parts adapted to conform to modern styling having a light, graceful appearance.

It is a further object of the present invention to provide a construction in which, in the upright position of the chair, the leg rest is located beneath the seat and is substantially concealed from view, and in which, in the reclining position of the chair, the leg rest is swung downwardly, forwardly and upwardly to a position in advance of the seat.

Other objects and advantages of the invention will appear hereinafter.

A preferred embodiment of the invention selected for purposes of illustration is shown in the accompanying drawings, in which,

Figure 1 is a side elevation of the chair, one side frame being broken away, the chair being shown in upright position.

Figure 2 is a similar view showing the chair in reclining position.

Figure 3 is a perspective view, showing the chair in upright position.

This application is a division of my copending application Serial No. 666,337, filed June 18, 1957, now U.S. Patent No. 2,875,814, granted March 3, 1959.

Referring to the drawings, the base frame comprises pairs of legs 1, 2 tied together transversely by cross bars 3, 4 to form a supporting cradle for the side frames 5, 6 which are rigidly secured thereto. The side frames may be rigidly connected by a cross frame 7. The legs 1, 2 and cross bars 3, 4 may conveniently be made of suitable structural metal shapes such as rods or tubing, and the side frames 5, 6 and cross frame 7 may conveniently be made of wood or metal, upholstered or not, as desired. The cradle and side frames together form a base frame unit supporting the movable parts of the chair as hereinafter described.

The movable parts of the chair include a backrest 8 and seat 9 which are rigidly connected together as a unit, and a leg rest 10. These parts may be of any desired type of standard construction, upholstered or not, as desired. As shown, each of these parts is an upholstered type, in which the upholstery is mounted on a suitable supporting frame. In the following description, the operative connections between the movable parts will be described with respect to only one side of the chair, it

being understood that said parts are duplicated on the other side of the chair.

A bracket 71 is rigidly mounted on the bottom of the frame of the seat and backrest, and this bracket is pivotally connected by a pivot pin 72 to a lever 73 which is pivotally mounted by pivot pin 74 on the side frame 5. One end of link 75 is also pivotally connected to bracket 71 by the pivot pin 72, and the other end of link 75 is connected by pivot pin 76 to one end of lever 77 which is pivotally mounted on side frame 5 by pivot pin 78. The pivot pin 78 is located intermediate the ends of lever 77, and the other end of the lever is pivotally connected to a leg rest actuating lever 28. When the seat and backrest unit is tilted backwardly as shown in Figure 2, swinging on pivot 74, the motion is transmitted through link 75 to lever 77 which actuates the lever 28 to operate the leg rest as hereinafter described.

A lever 81 is also provided which guides and supports the seat. Said lever is pivotally connected to the seat frame by pivot pin 82 and pivotally connected to the side frame 5 by pivot pin 83. In addition, if desired, the depending end of lever 81 may be connected to the depending end of lever 73 by link 84, said link being pivotally connected to said levers by pivot pins 85 and 86 respectively.

The leg rest actuating lever 28 is pivotally connected at its forward end to bracket 51 by pivot pin 52. It is also connected by pivot pin 53 to one end of connecting lever 54, the other end of which is pivotally mounted on the seat frame by pivot pin 55. Connecting lever 54 is pivotally connected at an intermediate point to one end of link 56 by pivot pin 57, the other end of said link 56 being pivotally connected by pivot pin 58 to one arm of a supporting lever 59 which is pivotally mounted on the seat frame by pivot pin 60. The other arm of the supporting lever 59 is pivotally connected to link 61 by pivot pin 62, and link 61, in turn, is pivotally connected to the leg rest frame by pivot pin 63 extending through bracket 64 attached to the leg rest frame.

In the upright position of the chair, as illustrated in Figures 1 and 3, the backrest slopes slightly backwardly from a vertical position, and the seat slopes slightly downwardly from front to back in order to provide a comfortable seated posture for the occupant. In this position, the leg rest is located beneath the seat, and is almost entirely concealed from view. In the reclining position, as illustrated in Figure 2, the backrest and seat are tilted backwardly and are moved backwardly with respect to the side frames. At the same time, the leg rest has been swung downwardly, forwardly and upwardly to a position to support the legs of the occupant.

The shift from upright to reclining position may be brought about whenever one sitting in the chair in its upright position exerts backward pressure against the backrest by shifting the weight of the body or by pressing forwardly against the side frames of the base unit, or both. As the seat and backrest moves backwardly, lever 73 swings on pivot 74, while link 75 causes lever 77 to swing on pivot 78 to move the leg rest actuating lever 28 forwardly. At the same time, the backward motion of the seat and backrest swings the lever 81 on its pivot 83 to guide and support the seat.

The forward motion of the actuating lever 28 has two results. First, it moves the pivot 52 of the leg rest forwardly to a position in advance of the seat. Second, through actuation of the connecting lever 54, link 56, supporting lever 59 and link 61, it swings the leg rest downwardly, forwardly and upwardly to the position shown in Figure 2.

If, now, it is desired to resume upright position, it is only necessary to exert slight downward pressure on the

leg rest, accompanied, if desired, by pressing backwardly against the side frames to relieve the backward pressure of the body against the backrest.

As shown in the drawings, the leg rest is mounted to swing on the forward end of the seat in the manner illustrated in Figures 1, 2 and 3 of my copending application hereinbefore referred to, but it will be understood that the mounting shown in Figures 4, 5, 6 and 7 of said copending application may also be used.

It will be understood that the invention may be variously modified and embodied within the scope of the subjoined claims.

I claim as my invention:

1. A reclining chair comprising a base unit having opposed, spaced side frames, a seat and backrest unit located between said side frames, a lever pivotally connected to the rear portion of said seat and backrest unit and pivotally mounted on an opposed side frame and supporting the rear portion of said seat and backrest unit for swinging movement on said side frame, a second lever pivotally mounted on said side frame and pivotally connected to the front portion of said seat and backrest unit and supporting the front portion of said seat and backrest unit for swinging movement on said side frame, a third lever pivotally mounted on said side frame at a point between the ends of said lever, a link pivotally connected to said seat and backrest unit and pivotally connected to one end of said third lever, a leg rest mounted to swing on the forward end of said seat, and means including a leg rest actuating lever pivotally connected to the other end of said third lever to actuate said leg rest upon swinging movement of said seat and backrest unit on said side frame.

2. A reclining chair as claimed in claim 1 in which the pivotal connection of said first lever to said seat and backrest unit coincides with the pivotal connection of said link to said seat and backrest unit.

3. A reclining chair as claimed in claim 1 in which said leg rest actuating means also includes a leg rest supporting lever pivotally mounted on said seat and backrest unit and operatively connected to said leg rest, and means including a connecting lever pivotally mounted on said seat and backrest unit for operatively connecting said leg rest supporting lever to said leg rest actuating lever.

4. A reclining chair comprising a base unit having opposed, spaced side frames, a seat and backrest unit located between said side frames, a lever pivotally mounted on an opposed side frame at a point between its ends, the upper end of said lever being pivotally connected to the rear portion of said seat and backrest unit and supporting the rear portion of said seat and backrest unit for swinging movement on said side frame, a second lever pivotally mounted on said opposed side frame at a point between its ends, the upper end of said lever being pivotally connected to the front portion of said seat and backrest unit and supporting the front portion of said seat and backrest unit for swinging movement on said side frame, and a link pivotally connected to the lower end of said first lever and pivotally connected to the lower end of said second lever.

5. A reclining chair comprising a base unit having opposed, spaced side frames, a seat and backrest unit located between said side frames and mounted for swinging movement on said side frames, a leg rest mounted to swing on the forward end of said seat, and means operatively connected to said seat and backrest unit to swing said leg rest to a position in advance of said seat when said seat and backrest unit is tilted backwardly with respect to said side frames, said means including a leg rest actuating lever pivotally connected to said leg rest and operatively connected to said seat and backrest unit, a connecting lever pivotally connected at one end to said seat and pivotally connected at its other end to said leg rest actuating lever, a leg rest supporting lever pivotally mounted on said seat, and a connecting link having one end pivotally connected to said connecting lever at a point between its ends and having its other end pivotally connected to said supporting lever at a point below the point where the supporting lever is mounted on said seat.

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