

June 2, 1964

S. LARSSON
SITTING FURNITURE

3,135,549

Filed Jan. 28, 1963

2 Sheets-Sheet 1

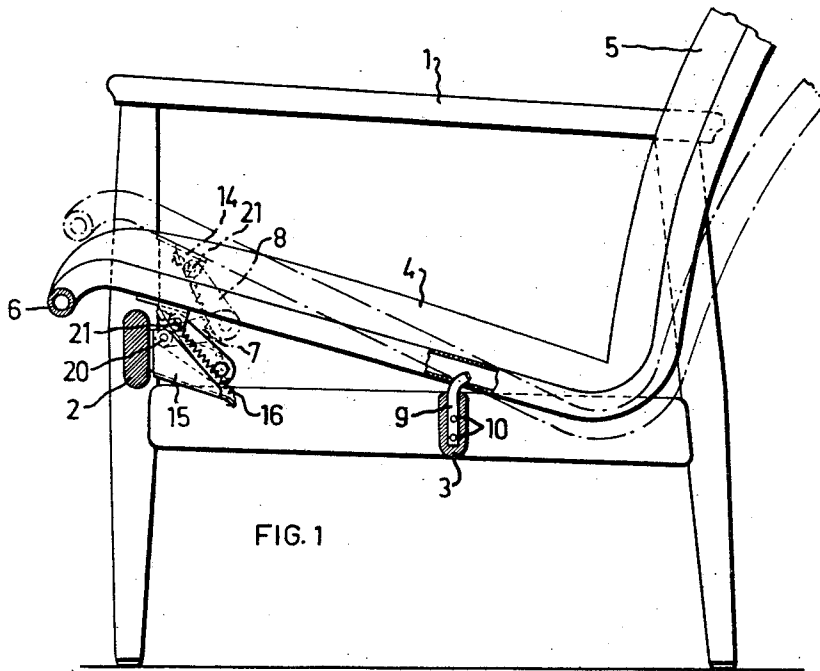


FIG. 1

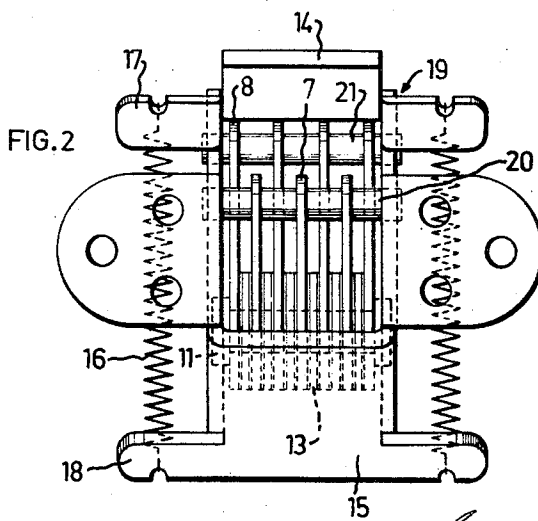


FIG. 2

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June 2, 1964

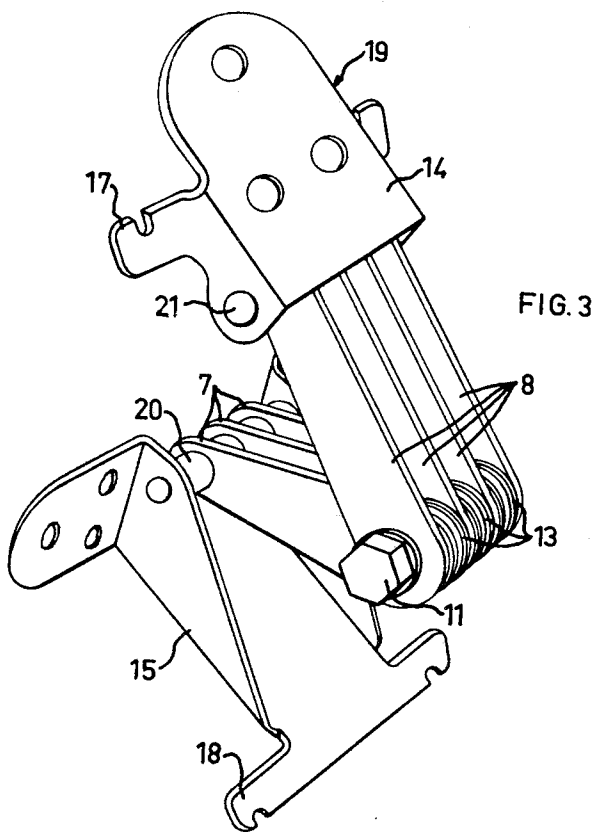
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2 Sheets-Sheet 2



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SITTING FURNITURE

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Filed Jan. 28, 1963, Ser. No. 254,274

Claims priority, application Sweden Jan. 31, 1962

3 Claims. (Cl. 297—303)

This invention relates to sitting furniture comprising a rigid seat and back assembly the seat portion of which at a distance from the back portion of said assembly is pivotally mounted on a frame with the aid of mounting means and has its front portion connected with said frame by a preferably collapsible linkage including at least two links which have their one ends pivotally connected together and their other ends pivotally connected with a holder disposed on said frame and a holder on the seat portion, respectively, friction means being provided in at least one of said pivot connections.

The invention is characterized by the fact that spring means are connected with said frame and said seat portion in such a way as to tend to collapse the linkage and exert thereon a force which in the collapsed state of the linkage is directed approximately longitudinally of the links, but in the extended state of the linkage makes a considerable angle with the longitudinal direction of at least one link.

These features of the invention and the advantages thereof will become apparent from the following description, reference being had to the accompanying drawing which illustrates an embodiment of the invention. In the drawing:

FIG. 1 is a vertical sectional view of a sitting furniture according to the invention;

FIG. 2 is a vertical elevational view of a linkage.

FIGURE 3 is a perspective view showing the links, the friction means and the holders.

The sitting furniture or chair illustrated in the drawing comprises a frame which is composed of two side members 1 connected together by two cross members 2, 3. Pivotaly mounted on said frame is an assembly comprising a seat portion 4 and a back portion 5. The seat and back portions are rigidly interconnected and have a frame of steel tubing 6.

The seat and back assembly 4, 5 is pivotally mounted on the rear cross member 3 by two pins 9 which are disposed in bores in the cross member and are bent at their upper ends. The pins 9 are retained to the cross member by screws 10 which also hold the side members 1 to the cross member 3. The pins 9 extend through bores in the part of the steel tubing 6 which rests on the cross member 3, in such a way that the bent portions of the pins are inside the steel tubing, thus preventing unintentional release of the seat and back assembly after the front part of the seat portion has been connected to the frame by means of a linkage 19. The pins furthermore are so arranged that they will not prevent the swinging of the assembly 4, 5 in spite of their bent ends.

The linkage 19 mounted at the front end of the seat portion consists of several links 7, 8 which have their one ends pivotally connected together and their other ends pivotally connected with a holder 15 disposed on the frame and a holder 14 disposed on the front part of the seat portion, respectively. The holders 14, 15 for the links comprise an attachment plate with holes for fixing screws and lateral elements extending at right angles from the attachment plate. Extending through the lateral elements of each holder is a shaft 20 and 21, respectively, serving as a mounting means for the links and secured to the lateral elements for example by riveting. Provided in the joint connecting the links are friction means

13 in the form of cup springs supported by a screw 11 serving as a pivot pin. Friction means of course can be arranged also in the other joints. The screw 11 is threaded on part of its length so that the degree of friction is easily adjusted by means of a nut.

The link holders 14, 15 on both sides have lugs 17 and 18, respectively, serving as attachments for coil-springs 16 provided between the holders 14, 15. The links 17, 18 are situated in such a manner in relation to the pivot pins 20 and 21, respectively, of the links 7, 8 that the springs tend to collapse the linkage and exert on said linkage a force which in the collapsed state of the linkage is directed approximately longitudinally of the links but in the extended state of the linkage makes a considerable angle with the longitudinal direction of at least one link.

By exertion of pressure on respectively the back portion 5 and the front part of the seat portion 4 the assembly 4, 5 can be swung to any desired position between an upright position defined by the front cross member 2 and shown by full lines in FIG. 1, and a rearwardly inclining position shown by dash and dot lines in FIG. 1. With collapsed linkage 19 and at the beginning of the return swinging movement of the seat and back assembly the springs secured to holders 14 and 15 exert but an insignificant spring action but as the swinging movement continues the spring action becomes larger. This is realized in that the springs—by reason of the positions of the spring attachments in relation to the mounting points of the links—initially swing only about the spring attachments in lugs 18 and are tensioned merely insignificantly, but are tensioned to an ever increasing extent according as the upper spring attachments on lugs 17 are swung upwardly and rearwardly.

The above embodiment of the invention was described for purposes of illustration rather than limitation. All possible variations and modifications of the invention are understood as being included within the scope of the claims.

What I claim and desire to secure by Letters Patent is:

1. A chair comprising a frame having side members, cross members interconnecting said side members, a rigid seat portion and back assembly, means pivotally mounting said assembly on said frame, a collapsible linkage connecting the front part of said seat portion with said frame comprising at least two first links having their one ends pivotally mounted on a pivot pin and at least two second links having their one ends mounted on a second pivot pin, said first and second links being connected together at their other ends by means of a third pivot pin, a holder means for each of said first and second pivot pins, said holder means being connected to said seat portion and said frame, respectively, spring means connected with said holder means in such a way as to tend to collapse said linkage and exert thereon a force which in the collapsed state of said linkage is directed approximately longitudinally of said links, but in the extended state of said linkage makes an angle with the longitudinal direction of at least one link.

2. A chair as claimed in claim 1 wherein said spring means comprise two coil springs attached by means of lugs on said holder means one on each side of said links.

3. A chair comprising a frame having side members, cross members interconnecting said side members, a rigid seat portion and back assembly, means pivotally mounting said assembly on said frame, a collapsible linkage connecting the front part of said seat portion with said frame comprising three first links having their one ends pivotally mounted on a pivot pin and four second links having their one ends mounted on a second pivot pin, said first and second links being connected together at

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their other ends by means of a third pivot pin, a holder means for each of said first and second pivot pins, said holder means being connected to said seat portion and said frame, respectively, friction means on said third pivot pin between each two of said links, spring means 5 connected with said holder means in such a way as to tend to collapse said linkage and exert thereon a force which in the collapsed state of said linkage is directed approximately longitudinally of said links, but in the extended state of said linkage makes an angle with the 10 longitudinal direction of at least one link.

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