April 1, 1952 G. K. ODÉN 2,591,284

FOLDABLE RECLINING CHAIR

Filed Feb. 26, 1948

Fig. 1

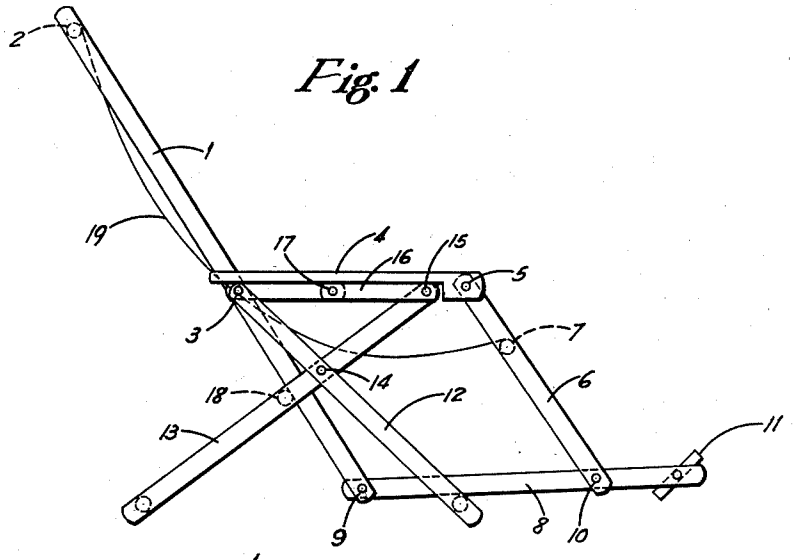



Fig. 2

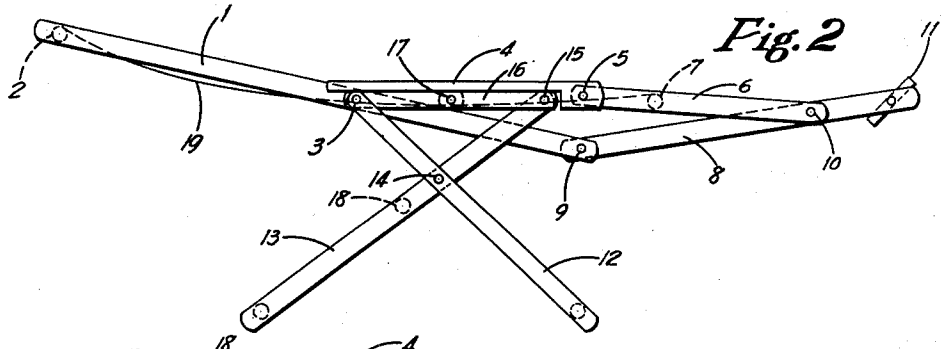
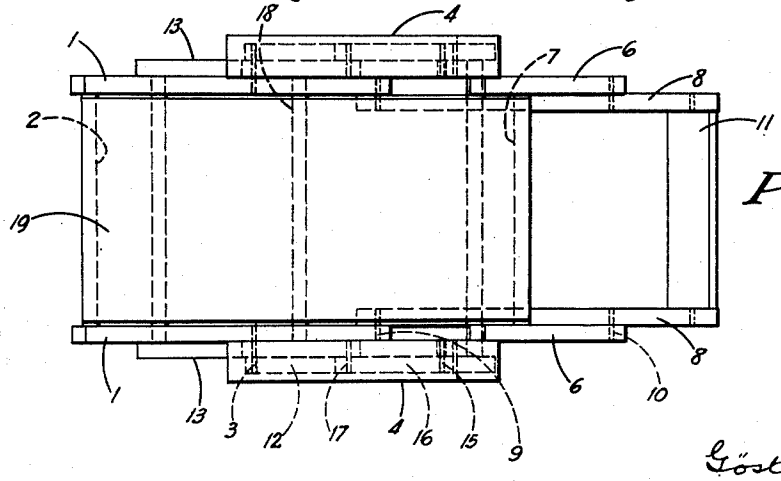



Fig. 3




INVENTOR.
Gösta K. Odén

BY

Brown, Critchlow, Flick & Peckham
his Attorneys

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## FOLDABLE RECLINING CHAIR

Gösta K. Odén, Nybro, Sweden

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2 Claims. (Cl. 155—106)

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This invention relates to folding chairs, and more particularly to those in which the seat and back are formed from a single sheet of canvas or other suitable material supported only at its ends.

It is among the objects of this invention to provide such a folding chair which, if desired, can be straightened out horizontally so that the occupant can lie out flat on it, and which can be folded into a flat bundle when not in use.

The preferred embodiment of this invention is illustrated in the accompanying drawings in which Fig. 1 is a side view of the chair; Fig. 2 is a side view showing the chair straightened out so that a person can lie down on it; and Fig. 3 is a plan view of the chair as seen in Fig. 1.

Referring to Figs. 1 and 2 of the drawings, a pair of steeply inclined parallel back bars 1 are spaced apart near their upper ends by a cross rod 2. The central portions of these bars are connected by pivots 3 to the rear ends of a pair of substantially horizontal armrests 4. Connected by pivots 5 to the front ends of the armrests are the upper ends of a pair of front bars 6 that are spaced apart by a cross rod 7 a short distance below their upper ends. These bars are held parallel to the back bars by a pair of base bars 8 which are connected by pivots 9 and 10 to the lower ends of the back and front bars, respectively. The base bars extend ahead of the front bars and have their front ends connected by a board serving as a footrest 11. The armrests and the bars at each side of the chair thus form a parallel linkage system which can be collapsed by moving pivot 10 toward pivot 3, or by moving pivot 9 toward pivot 5.

The chair is supported by two pairs of crossed legs, one pair being located beneath each armrest. The legs 12 and 13 of each pair are connected by a pivot 14, and the upper ends of legs 12 are connected to the pivots 3 that fasten the armrests to the back bars 1. In order to permit each pair of legs to be folded together when desired, the upper ends of legs 13 are connected by pivots 15 to the front ends of a pair of horizontal links 16, each one of which is disposed in a recess in the bottom of an armrest. The rear ends of these links are connected by pivots 17 to the central portions of the armrests. Upward movement of the front ends of the links is limited by the overlying portions of the armrests. The central portions of legs 13 are connected by a cross rod 18 that limits the distance that the lower ends of back bars 1 can be swung rearward.

The seat and its back for this chair are formed by a sheet 19 of canvas or other suitable flexible

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material having the required strength. The upper end of the canvas is secured to cross rod 2, while its lower end is fastened to cross rod 7. Between these rods the canvas is slack, as is customary in chairs of this character.

This chair can be used as an ordinary chair as shown in Fig. 1, or, by pressing on the footrest and leaning back simultaneously, the back bars 1 can be caused to rock back on pivots 3 to swing their upper ends downward and their lower ends upward. Due to the parallel linkage system the rising lower ends of the back bars will swing front bars 6 and base bars 8 upward to the position shown in Fig. 2 where pivot 9 is close to pivot 5. Also, this straightening of the bars simultaneously moves cross rods 2 and 7 farther apart to stretch the flexible sheet 19 into a generally horizontal position. The chair then serves as a couch on which the occupant can lie practically flat on his back.

When it is desired to collapse the chair for storage or transportation to another location, the footrest 11 can be swung upward and backward toward the back bars with pivot 10 close to pivot 3. This will cause base bars 8, front bars 6, and the armrests to extend lengthwise along the back bars. The lower front ends of legs 12 then can be swung backward to a position substantially in line with the armrests; this movement being permitted by links 16 which will swing first away from the armrests and then back toward their rear portions as the crossed legs fold together on their central pivots 14 to extend in the same general direction as the collapsed bars and armrests. In this manner the chair is folded into a compact flat bundle.

According to the provisions of the patent statutes, I have explained the principle of my invention and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. A folding reclining chair comprising a pair of substantially horizontal armrests, a pair of back bars pivoted centrally to the rear ends of the armrests, a pair of front bars parallel to the back bars and pivoted at their upper ends to the front ends of the armrests, a pair of base bars parallel to the armrests and pivotally connected to the lower ends of the back and front bars, the base bars projecting forward from the front bars, a footrest connecting the projecting front ends of

the base bars, a sheet of flexible material suspended from between the upper ends of the back bars and having its lower end connected between the upper portions of the front bars to form a combined seat and backrest, a pair of crossed legs below each armrest for supporting it, the lower ends of the back bars being adapted to be swung upward toward the armrests to raise the footrest and lower the upper ends of the back bars to thereby stretch said flexible material substantially horizontally to form a reclining support, each pair of legs being pivoted together and having the upper end of one of them pivoted to the rear end of the adjoining armrest, and a substantially horizontal link pivotally connected at its rear end to the central portion of each armrest and pivotally connected at its front end to the upper end of the other leg beneath that armrest, said links being adapted to be swung down and then up beneath the rear portions of the armrests to fold the legs together substantially in line with the armrests when the base bars are folded up against the back bars whereby the chair can be folded into a flat bundle.

2. A folding and reclining chair comprising a pair of armrests, a pair of back bars, a pair of front bars pivoted at their upper ends to the armrests, a pair of base bars pivotally connected to the lower ends of the front and back bars and having portions extending beyond the pivotal connections of said base bars to said front bars,



means connecting the front ends of the base bars, a cross bar connecting the upper ends of the back bars, a second cross bar connecting the intermediate portions of the front bars together, a sheet of flexible material having its ends connected to said cross bars, two pairs of crossed legs arranged one pair at each side of the chair, pivot means connecting the intermediate portions of the legs of each pair, means pivotally connecting the upper end of one of the crossed legs of each pair to the rear end of the adjacent armrest and to an intermediate portion of the adjacent one of the back bars, a pair of links each having one end connected to an intermediate part of an armrest and the other end connected to the upper end of the other leg of the adjacent pair of crossed legs.

GÖSTA K. ODÉN.


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