

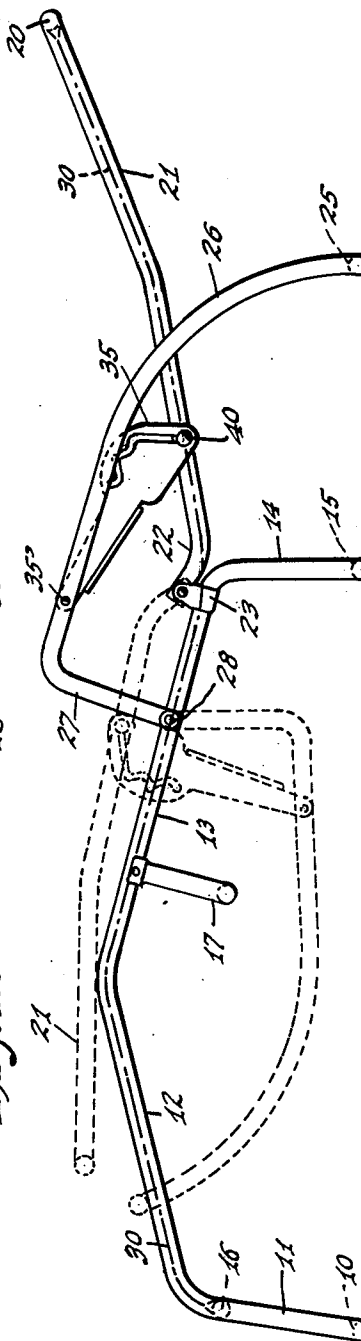
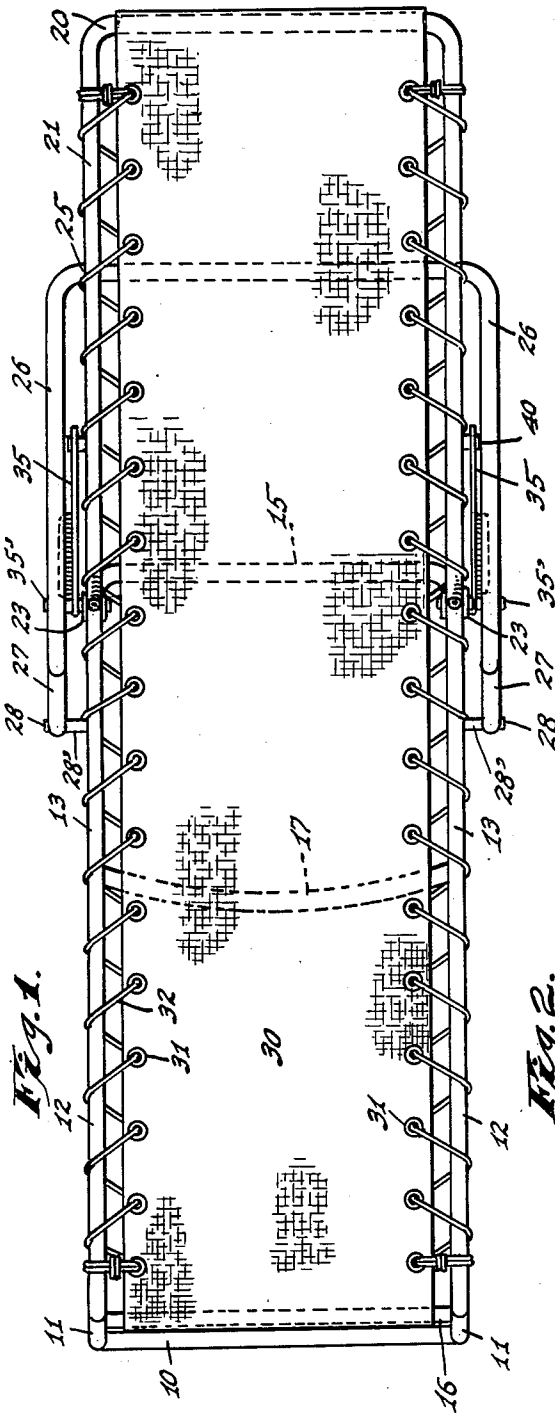
Jan. 8, 1957

E. L. MOORE ET AL  
RECLINING CHAISE LONGUE

2,776,704

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3 Sheets-Sheet 1



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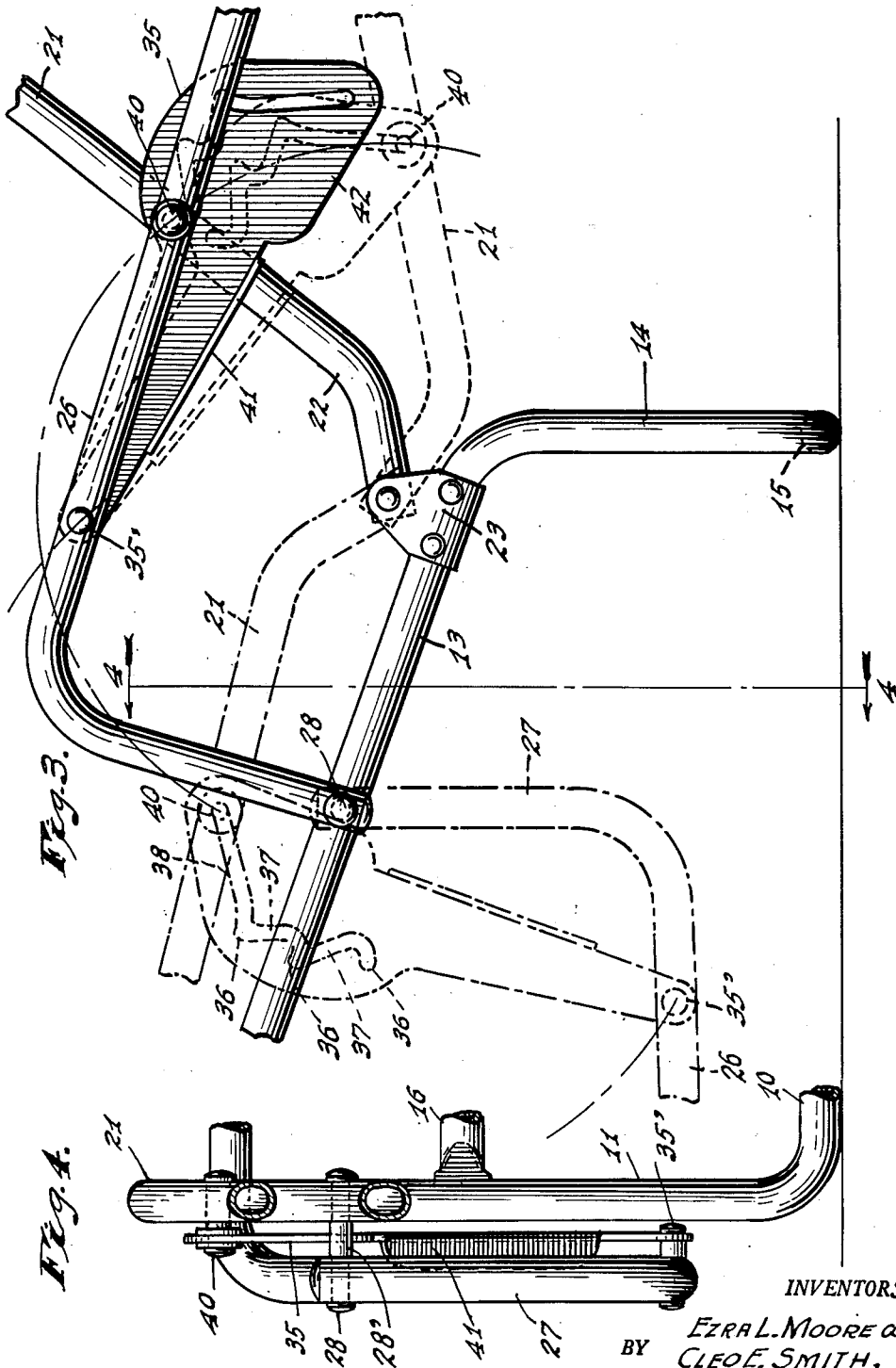
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3 Sheets-Sheet 2



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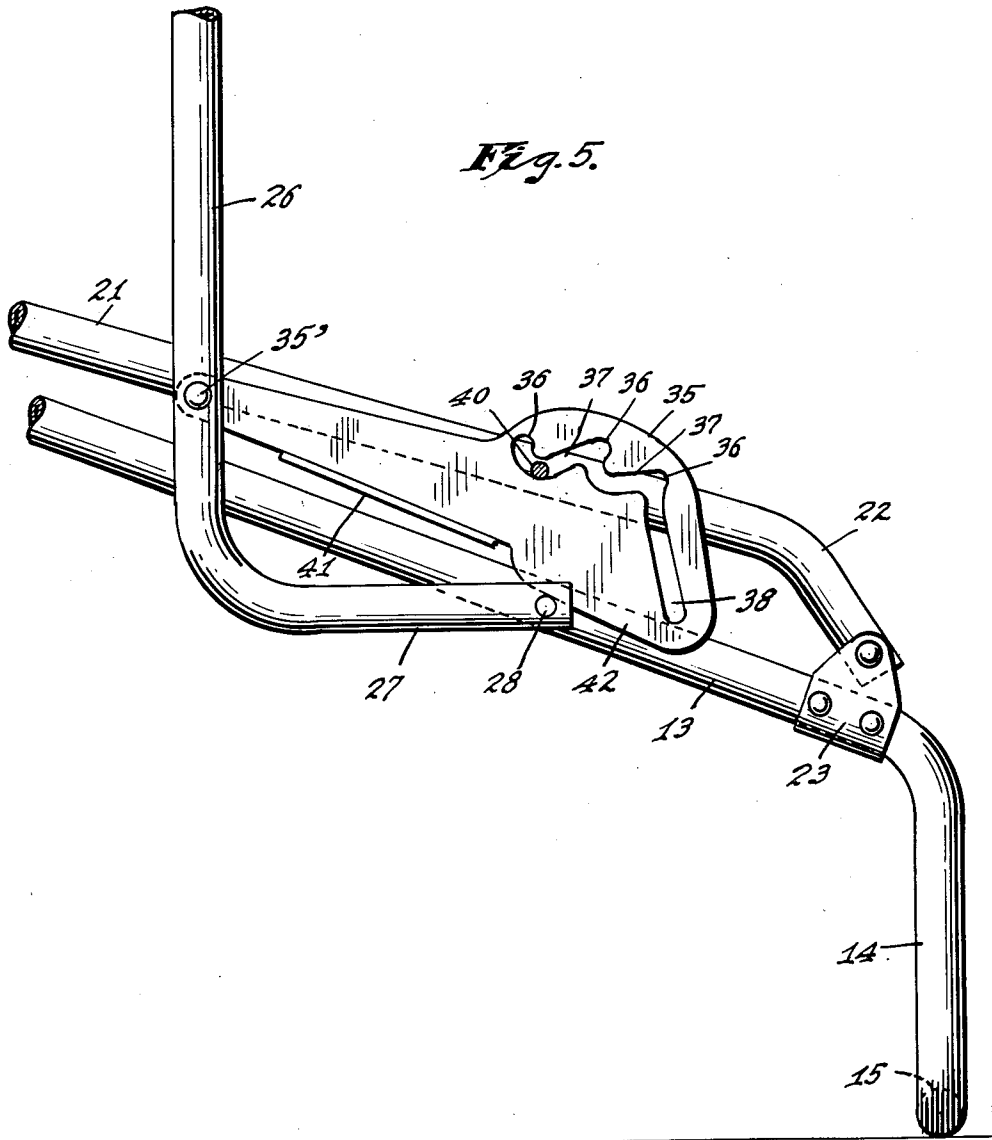
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1

2,776,704

## RECLINING CHAISE LONGUE

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8 Claims. (Cl. 155—117)

This invention relates to a reclining chaise longue and more particularly to a chaise longue adapted to be used out-of-doors and to be manufactured from metal tubing and sheet-metal parts.

An article embodying the invention is characterized by the incorporation of a main structure providing a seat and leg rest, a back frame, and a brace structure arranged to support the back frame in any of a plurality of positions of adjustment. The back frame is pivoted to the main structure near the rear end thereof. The bracing structure is pivoted to the main frame in advance of the rear end thereof, and its free end is adapted to rest on the floor or other supporting surface in rear of the main structure. The brace structure carries a pair of pivotally mounted latch members which cooperate with abutments on the sides of the back frame to hold the back frame in any of its positions of adjustment against a rearwardly directed effort. The back frame and the brace structure are swingable from their extended positions to collapsed positions overlying the main structure. The main and brace structures and the back frame are conveniently made of lightweight metal tubing.

In the accompanying drawing, which illustrates a preferred embodiment of the invention:

Fig. 1 is a plan view of the chaise longue in extended position;

Fig. 2 is a side elevation showing the article in extended position in full lines and in collapsed position in dotted lines;

Fig. 3 is a fragmental side elevation on an enlarged scale showing different positions of adjustment of the back frame;

Fig. 4 is a fragmental vertical section on the line 4—4 of Fig. 3; and

Fig. 5 is a view similar to Fig. 3 illustrating an intermediate stage in movement of the back frame and brace structure to collapsed condition.

The article shown comprises a main frame, preferably formed of a single length of metal tubing bent to provide a front transverse portion 10, upwardly extending front legs 11, rearwardly and upwardly inclined leg-rest portions 12, rearwardly and downwardly inclined seat portions 13, and rear legs 14. Desirably, the extreme ends of the tubing are bent to extend inwardly in aligned relation from the lower ends of the legs 14 and are united in any suitable manner to form a rear transverse member 15. Adjacent the upper ends of the legs 11 the frame is provided with a stretcher 16; and a second stretcher 17 extends between the seat portions 13 of the main frame. The latter stretcher is desirably arched downwardly to clear the flexible seat with which the chaise longue is provided, as will be brought out hereinafter.

The back frame conveniently comprises a single length of metal tubing having a transversely extending intermediate portion 20 and parallel sides 21 the ends of which may be bent upwardly and forwardly, as indicated at 22, and pivotally connected to brackets 23 secured to the main frame at the rear of the seat portions 13.

2

The brace structure likewise may comprise a single length of metal tubing bent to provide a transverse intermediate portion 25 and sides 26. In the extended condition of the chaise longue, the sides 26 curve forwardly and upwardly from the intermediate portion 25 until they extend generally parallel to the seat portions 13 of the main frame to provide arms, the ends of the sides being bent, as indicated at 27, to extend downwardly for pivotal connection to the seat portions 13 of the main frame through aligned pivot bolts 28.

The brackets 23 are so arranged as to support the back frame with its sides 21 substantially coplanar respectively with the sides of the main frame. The sides 26 of the brace structure are spaced outwardly from the sides of the main and back frames to provide for the reception of the adjustable latch mechanism by which the back is held in its several positions of adjustment. A spacing sleeve 28' may surround each pivot bolt 28 between the main frame and the sides of the brace structure.

In the article shown, a single strip 30 of fabric, woven plastic, or like flexible material provides the leg rest, seat, and back. One end of such strip is secured to the front stretcher 16, while the other end is secured to the intermediate portion 20 of the back frame. Series of eyelets 31 extend along the sides of the strip 30, and such strip-sides are secured to the sides of the main and back frames by lacings 32 which pass through the eyelets and around the frame-sides.

To hold the back frame in any of its several positions of adjustment, I employ a pair of similar latch plates 35 which are pivoted to the arms 26 near the front ends thereof by pivot members 35' and which, when the chaise longue is in any extended position, extend rearwardly between such arms and the sides 21 of the back frame. Each of such latch plates is provided (Fig. 5) with a zig-zag slot having transversely extending portions 36, shown as three in number, interconnected by inclined portions 37 each of which extends from the lower end of each transverse slot to the upper end of the next transverse portion to the rear. The lower end of the rearmost transverse portion 36 connects with an elongated oblique portion 38.

A bolt or shouldered rivet 40 projecting outwardly from each side 21 of the back frame extends through the slot in the associated latch plate 35. The rear wall of the edge of each transverse slot-portion 36 is approximately normal to a radius drawn from it to the pivot 35' of the latch plate, so that rearward pressure of the bolt 40 against the rear wall of the slot will not tend to cam the latch plate upwardly. When the chaise longue is in extended condition, the arms 26 occupy the full-line position shown in Fig. 3, and the latch plates 35 extend generally rearwardly from their pivots 35' so that the force of gravity urges them downwardly to cause the upper surface of the slot in the latch plate to ride on the bolt 40. If the bolt 40 occupies the upper end of any transverse portion 36, the latch plate serves to hold the back in fixed position against any rearwardly directed effort such as might be applied to it by an occupant of the device. Except when the bolt 40 is in the front transverse slot 36, the back can be moved forwardly by the application of forwardly directed effort to it, as the upper walls of the inclined slot-portions 37 provide cam surfaces which lift the latch plates as the back swings forwardly. To release the latch plates and permit rearward swinging of the back, the latch plates are manually lifted to bring the bolts 40 into the lower ends of the transverse slots 36; and as long as the latch plates are maintained in lifted position, the back can swing or be swung rearwardly and downwardly until the bolts 40 engage the rear ends of the slot-portions 38. The extreme position of the back, which is approximately horizontal, is indi-

cated in dotted lines in Fig. 3 and in full lines in Fig. 2. To facilitate the application of lifting effort to the latch plates 35 each of them may be provided along its lower edge with an out-turned flange 41.

When the chaise longue is in extended condition it can be collapsed by applying an upwardly and forwardly directed effort to either the back or the brace structure. If the effort is applied to the back, the brace structure remains stationary until the bolts 40 reach the front ends of the slots in the latch plates, whereupon the brace structure is caused to swing forwardly about the axis of the bolts 28. During all but the latter portion of the swinging movement of the back to collapsed position, the force of gravity, by urging the latch plates 35 downwardly, maintains the bolts 40 at the upper ends of the front transverse slot-portion 36, with the result that approach of the brace structure to the back is limited. However, the latch plates have tail portions 42 adapted, as the back approaches its fully collapsed position shown in Fig. 5 and in chain lines in Fig. 3, to engage the bolts 28 and raise the latch plates to bring the bolts 40 into the lower portions of the lower ends of the slot-portions 36. In effect, the bolts 28 apply an upward effort to the rear ends of the latch plates 35, thus holding the lower surfaces of the latch-plate slots in contact with the bolts 40 and permitting the brace structure to swing forwardly into the chain-line position shown in Fig. 3.

If collapsing effort is applied to the brace structure rather than to the back, the back will also be swung forwardly, as the engagement of the bolts 40 in any transverse slot-portion 36 or with the extreme end of the slot-portion 38 limits approach of the brace structure toward the back. Joint swinging movement of the arm-structure and back continues until the tail pieces 42 of the latch plate 35 engage the bolts 28, thus releasing the latch plates as above described and permitting the brace structure to continue movement into the chain-line position of Fig. 3.

As will be obvious from a comparison of Fig. 5 with the chain-line showing of Fig. 3, continued forward swinging of the brace structure after the back has reached fully collapsed condition will cause the common plane of the pins 35' and 40 to approach the pivots 28. If such plane were to pass through the axis of the pivots 28 before the brace reached fully collapsed position, the back would be positively locked in its fully collapsed position and it would be necessary to raise the brace structure sufficiently to bring the plane of the pins 35' and 40 to the forward side of the pivots 28 before the back could be moved away from the base. Such a condition would be advantageous, as it would permit the fully collapsed structure to be lifted and carried by effort applied to the transverse back portion. However, this result can be effectively attained in practice even if the plane referred to does not pass through the axis of pivots 28 when the structure is collapsed. Thus, if the pins 28, 35', and 40 are appropriately disposed (see chain-line showing of Fig. 3), the plane of the pins 35' and 40, while still lying forwardly of the pivots 28 in the collapsed condition, will be so close to such pivots that the lever arm of any force transmitted through the plates 35 between the pins 35' and the pins 40 will be extremely short—so short, in fact, that the application to the back portion 20 of an upward effort sufficient to lift the entire structure will not possess a moment about the pivots 28 sufficient to swing the brace structure against the force of gravity. At the same time, when upward effort is applied to the collapsed brace structure the resultant force transmitted through the latch plates to the back has a very substantial moment about the axis of the back, and the back therefore will swing upwardly while the effort applied to the brace structure remains well below that which would result in elevation of the main frame. As a result of this arrangement of the axes of the back and brace structure and the location of the pins 35' and 40, the preferred form of chaise longue will always be ex-

tended from completely collapsed condition by applying an upward effort to the brace structure.

We claim as our invention:

1. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section on a first transverse axis adjacent the rear edge of the seat, a brace structure pivotally connected to the main section on a second transverse axis spaced forwardly from the said first axis, said brace structure having a free end engageable with a supporting surface in rear of the main section to support the structure in extended position and being swingable forwardly over said main section to a collapsed position, said brace structure including arms dispersed at the side of and above the seat when the brace structure is in extended position, releasable means acting between the brace structure and back for preventing rearward swinging of the back beyond any of a plurality of predetermined extended positions relative to the brace structure, said back being swingable forwardly about said first axis to a collapsed position over said main section, and release means operative at a predetermined point in the forward swinging of said brace structure to release said releasable means.

2. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section on a first transverse axis adjacent the rear edge of the seat, a brace structure pivotally connected to the main section on a second transverse axis spaced forwardly from the said first axis, said brace structure having a free end engageable with a supporting surface in rear of the main section to support the structure in extended position and being swingable forwardly over said main section to a collapsed position, releasable means acting between the brace structure and back for preventing rearward swinging of the back beyond any of a plurality of predetermined extended positions relative to the brace structure, said back being swingable forwardly about said first axis to a collapsed position over said main section, and release means operative at a predetermined point in the forward swinging of said brace structure to release said releasable means.

3. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section on a first transverse axis adjacent the rear edge of the seat, a brace structure pivotally connected to the main section on a second transverse axis spaced forwardly from the said first axis, said brace structure having a free end engageable with a supporting surface in rear of the main section to support the structure in extended position and being swingable forwardly over said main section to a collapsed position, said brace structure including arms dispersed at the side of and above the seat when the brace structure is in extended position, releasable means acting between the brace structure and back for preventing rearward swinging of the back beyond a predetermined extended position relative to the brace structure, said back being swingable forwardly about said first axis to a collapsed position over said main section, and release means operative at a predetermined point in the forward swinging of said brace structure to release said releasable means.

4. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section on a first transverse axis adjacent the rear edge of the seat, a brace structure pivotally connected to the main section on a second transverse axis spaced forwardly from the said first axis, said brace structure having a free end engageable with a supporting surface in rear of the main section to support the structure in extended position and being swingable forwardly over said main section to a collapsed position, releasable means acting between the brace structure and back for preventing rearward swinging of the back beyond a predetermined extended position relative to the brace structure, said back being swingable forwardly about said first axis to a collapsed position over said main section, and release means

5

operative at a predetermined point in the forward swinging of said brace structure to release said releasable means.

5. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section on a first transverse axis adjacent the rear edge of the seat, a brace structure pivotally connected to the main section on a second transverse axis spaced forwardly from the said first axis, said brace structure having a free end engageable with a supporting surface in rear of the main section to support the structure in extended position and being swingable forwardly over said main section to a collapsed position, and releasable means acting between the brace structure and back for preventing rearward swinging of the back beyond a predetermined extended position relative to the brace structure, said back being swingable forwardly about said first axis to a collapsed position over said main section.

6. An article of furniture, comprising a main section including a seat, a back pivotally connected to said main section and swingable between a collapsed, generally horizontal position above said main section and an extended position in which it is adapted to provide support for the back of a person occupying the seat, a pivotally mounted brace structure swingable between a collapsed position and an extended position in which it rests on a supporting surface in rear of the main section, releasable latch means acting between the back and brace structure for limiting rearward swinging of the back, and means operative at a predetermined point in forward swinging of the brace structure to release said latch means.

7. An article of furniture as set forth in claim 1 with

6

the addition that said releasable means includes latch plates each pivotally connected on a horizontal axis to an arm at a point forwardly of said back when the latter is in any of its extended positions, abutments on said back, said latch plate being provided with elongated slots respectively receiving said abutments and having a series of spaced, forwardly presented surfaces engageable selectively with said abutments to limit rearward swinging of the back, said latch plates being swingable upwardly to move said surfaces out of the paths of the abutments, said release means being carried by said main section in position to engage the latch plates at said predetermined point in its forward swinging.

8. An article of furniture in accordance with claim 5 with the addition that said releasable means comprises a slotted link connected to said back and brace structure at points so spaced from said axes that when the back and brace structure are in collapsed condition the plane of said pivots will be so disposed relatively to said second axis that an effort sufficient to lift the entire article can be applied to the collapsed back without causing the brace structure to swing upwardly about said second axis.

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