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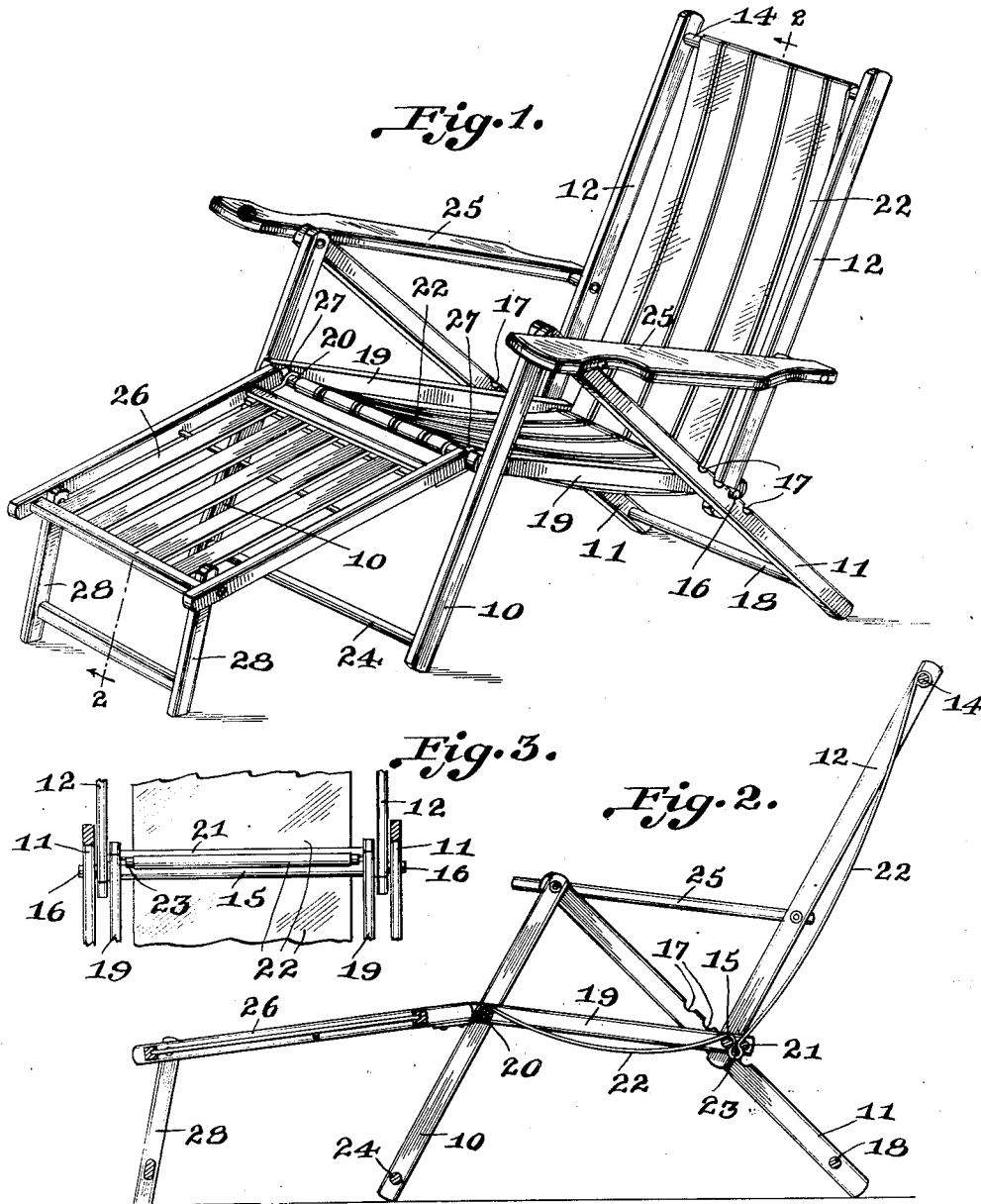
L. W. EMERSON

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FOLDING CHAIR

Filed March 16, 1933

2 Sheets-Sheet 1



Inventor

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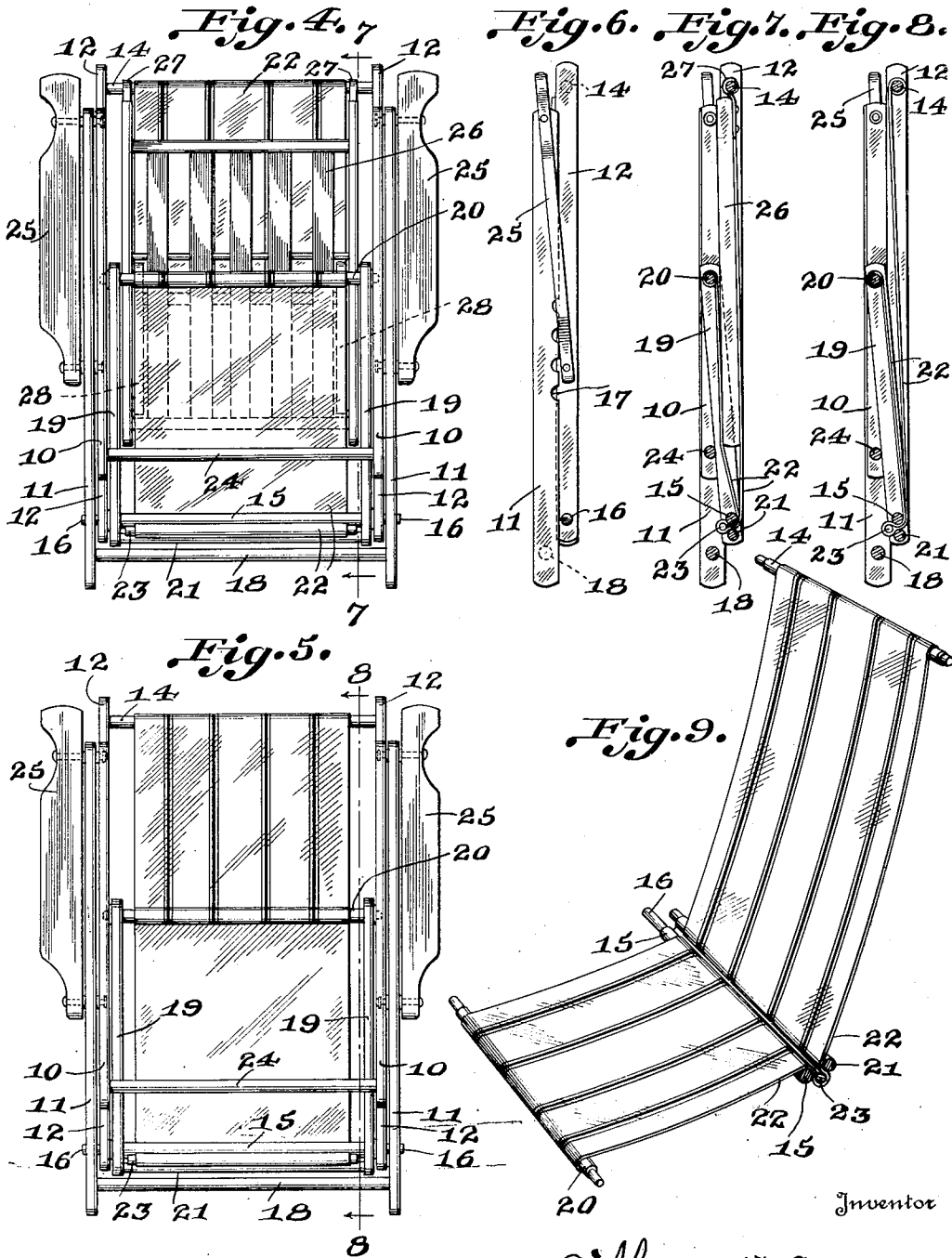
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UNITED STATES PATENT OFFICE

1,980,615

FOLDING CHAIR

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Application March 16, 1933, Serial No. 661,149

REISSUED

5 Claims. (Cl. 155—117)

The object of the invention is to provide a folding chair for beach or steamer or equivalent use which may be folded up into such compact form as to be then of a thickness no greater than the combined widths of the struts constituting its supporting element and of a reduced length; to provide a folding chair in which a continuous web constitutes both the seat and back and is anchored at the line defining the juncture at the seat and back, so that no undue strain may be imposed upon it, so that it may be readily detached from the frame at this point and so that it may be adjusted to increase or diminish the fullness of the seat or of the back; and generally to provide a chair of the kind indicated which is of simple form and susceptible of cheap manufacture.

With this object in view the invention consists in the construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings but to which embodiment the invention is not to be restricted. Continued use in practice may dictate certain changes or alterations and the right is claimed to make any such changes or alterations as will fall within the scope of the annexed claims.

In the drawings:

Figure 1 is a perspective view of the invention in its extended position.

Figure 2 is a sectional view on the plane indicated by the line 2—2 of Fig. 1.

Figure 3 is a bottom plan view.

Figure 4 is a front view showing the chair and its attendant leg rest in folded position.

Figure 5 is a view similar to Fig. 4.

Figure 6 is a side view of the structure of Fig. 4.

Figure 7 is a sectional view on the plane indicated by the line 7—7 of Fig. 4.

Figure 8 is a sectional view on the plane indicated by the line 8—8 of Fig. 5.

Figure 9 is a perspective view of the web and its attendant supporting bars.

The chair is supported on the front and rear legs 10 and 11, the latter being pivotally connected to the former at their upper ends. The rear legs have always a pronounced inclination, when the chair is extended, while the front legs incline slightly from the vertical in the most upright position of the back and increase their inclination as the back is adjusted rearwardly, the planes of the front legs and back being parallel in every instance.

The back comprises the side rails 12 connected at their upper ends with a tie bar 14 and at their lower ends with the cross bar 15, the extremities

of which are reduced in diameter to provide protruding studs 16 which are adapted for seating in the notches or seats 17 formed in the upper edges of the rear legs which are interconnected at their lower ends with a tie bar 18.

The seat is defined by the side rails 19 which are pivotally connected with the tie bar 20 connecting the front legs at intermediate points in their lengths, these side rails 19 having also pivotal connections with the cross bar 15 beyond which they extend slight distances to be connected by a tie bar 21 which is parallel with but spaced from the cross bar 15 a distance sufficient to permit the passage of a double thickness of the web 22 constituting the seat and back, one extremity of the web being connected to the tie bar 20 and the other to the tie bar 14.

An intermediate portion of the web extends in double thickness through the space between the tie bar 21 and the cross bar 15 and receives in the loop thus formed the lock bar or stick 23, the diameter of which is greater than the spacing between the bars 21 and 15, so that the web is locked at this point and a line of juncture between the seat and back defined.

The front legs at the lower end are connected by the tie rod 24 and arm 25 are provided with pivotal connections with the side rails 12 of the back and also pivotal connections with the front legs 10 in common with the pivotal connections between the latter and the rear legs.

The pivotal connections of the arms with the side rails of the back are the same distances from the cross bar 15 as the pivotal connections of the arms with the front legs are from the tie bar 20. Similarly, the lengths of the arms as defined by the pivotal connections are the same as the lengths of the side rails 19 of the seat, as defined by their pivotal connections with the tie bar 20 and the cross bar 15. Thus the arms and the side rails of the seat and portions of the front legs and portions of the side rails of the back define parallelograms, whatever the adjustment, and that may be any one of several positions between a substantial upright position of the back or a pronounced rearward inclination of the latter depending on which notches or seats in the rear legs the studs 16 are engaged. By arranging the linkage to define a parallelogram, the most compact position of the elements is secured in the folding operation, this arrangement permitting the front legs to fold down between the rear legs and in edge-abutting engagement with the side rails of the back, the side rails of the seat falling

in between the front legs and the arms lying just outside of the rear legs.

The back rest portion 12 projects upward beyond its pivot axis with the arm rest portion 25 to an extent substantially the length of the arm rest portion. Because of this construction the chair, when it is folded, is reduced to a minimum length in one direction. It will be readily seen, in Figs. 6 to 8, that no members of the chair extend greatly beyond the coextensive portions of the chair and that, therefore, the length of the chair when folded is governed, in the main, by the sum of two adjacent sides of the parallelogram and is not much greater than this length. To this end, it will also be noted that the front legs portion 10 project downwardly to an extent substantially the length of the seat portion 19. Likewise, the rear leg portion 11 is substantially the same length as the sum of two adjacent sides of the parallelogram. It is this feature that contributes greatly to the compactness of the chair when it is folded for shipment, or other purposes.

By reason of the lock bar or stick, the web at the line of juncture between the seat and back may be readily adjusted to increase or diminish the fullness of either.

A detachable leg rest is provided for use with the chair and this comprises a slatted platform 26, the side rails of which at one end are provided with the hooks 27 for engagement with the tie bar 20 when the chair is extended. The leg rest may have its free end rest on the floor to assume a pronounced inclined position, or it may be elevated above the floor level by extending its legs 28 which are foldably connected with it.

In the folded position of the chair, the legs of the leg rest are folded down against the platform and the latter is inserted between the seat and back with the hooks 26 engaged with the cross bar, as clearly shown in Figure 4 of the drawings.

The invention having been described, what is claimed as new and useful is:

1. A collapsible chair comprising, front leg and back rest portions, and arm rest and seat portions, respectively forming opposite sides of a parallelogram pivoted at its corners, and a rear leg portion pivoted at the juncture of the arm rest and front leg portions and adapted to extend diagonally across and detachably connected at an intermediate point to the parallelogram, the back rest portion projecting beyond its pivot with the arm rest portion in one direction to an extent substantially the length of the arm rest portion, the front leg portion projecting beyond its pivot with the seat portion in the opposite direction to an extent substantially the length of the seat portion, and the rear leg portion extending from its pivot substantially the length of two adjacent sides of the parallelogram, whereby the chair can be compactly folded.

2. A collapsible chair comprising, front leg and back rest portions, and arm rest and seat portions, respectively forming opposite sides of a parallelogram pivoted at its corners, a rear leg portion pivoted at the juncture of the arm rest and front leg portions and adapted to extend diagonally across the parallelogram, and means at the juncture of the back rest portion and seat

portion to engage the rear leg portion adjustably at various points along its length for holding the chair to desired seating position, the back rest portion projecting beyond its pivot with the arm rest portion in one direction to an extent substantially the length of the arm rest portion, the front leg portion projecting beyond its pivot with the seat portion in the opposite direction to an extent substantially the length of the seat portion, and the rear leg portion extending from its pivot substantially the length of two adjacent sides of the parallelogram, whereby the chair can be compactly folded.

3. A collapsible chair comprising front leg and back rest portions, and arm rest and seat portions, respectively forming opposite sides of a parallelogram pivoted at its corners, and a diagonally extending rear leg connected at one end to one corner of the parallelogram and intermediate its ends detachably connected to the other corner of the parallelogram, the back rest portion projecting beyond its pivot with the arm rest portion in one direction to an extent substantially the length of the arm rest portion, the front leg portion projecting beyond its pivot with the seat portion in the opposite direction to an extent substantially the length of the seat portion, and the rear leg portion extending from its pivot substantially the length of two adjacent sides of the parallelogram, whereby the chair can be compactly folded.

4. A collapsible chair comprising front leg and back rest portions, and arm rest and seat portions, respectively forming opposite sides of a parallelogram pivoted at its corners, and a rear leg constituting a diagonal of the parallelogram to which it is connected at one end and at an intermediate point in its length, one of said connections being pivotal and the other releasable, the back rest portion projecting beyond its pivot with the arm rest portion in one direction to an extent substantially the length of the arm rest portion, the front leg portion projecting beyond its pivot with the seat portion in the opposite direction to an extent substantially the length of the seat portion, and the rear leg portion extending from its pivot substantially the length of two adjacent sides of the parallelogram, whereby the chair can be compactly folded.

5. A collapsible chair comprising front leg and back rest portions, and arm rest and seat portions, respectively forming opposite sides of a parallelogram pivoted at its corners, and a rear leg constituting a diagonal of the parallelogram with which it has a swinging connection at one end to one corner of the parallelogram, and a releasable connection at an intermediate point to the opposite corner of the parallelogram, the back rest portion projecting beyond its pivot with the arm rest portion in one direction to an extent substantially the length of the arm rest portion, the front leg portion projecting beyond its pivot with the seat portion in the opposite direction to an extent substantially the length of the seat portion, and the rear leg portion extending from its pivot substantially the length of two adjacent sides of the parallelogram, whereby the chair can be compactly folded.

LILLEY W. EMERSON.