

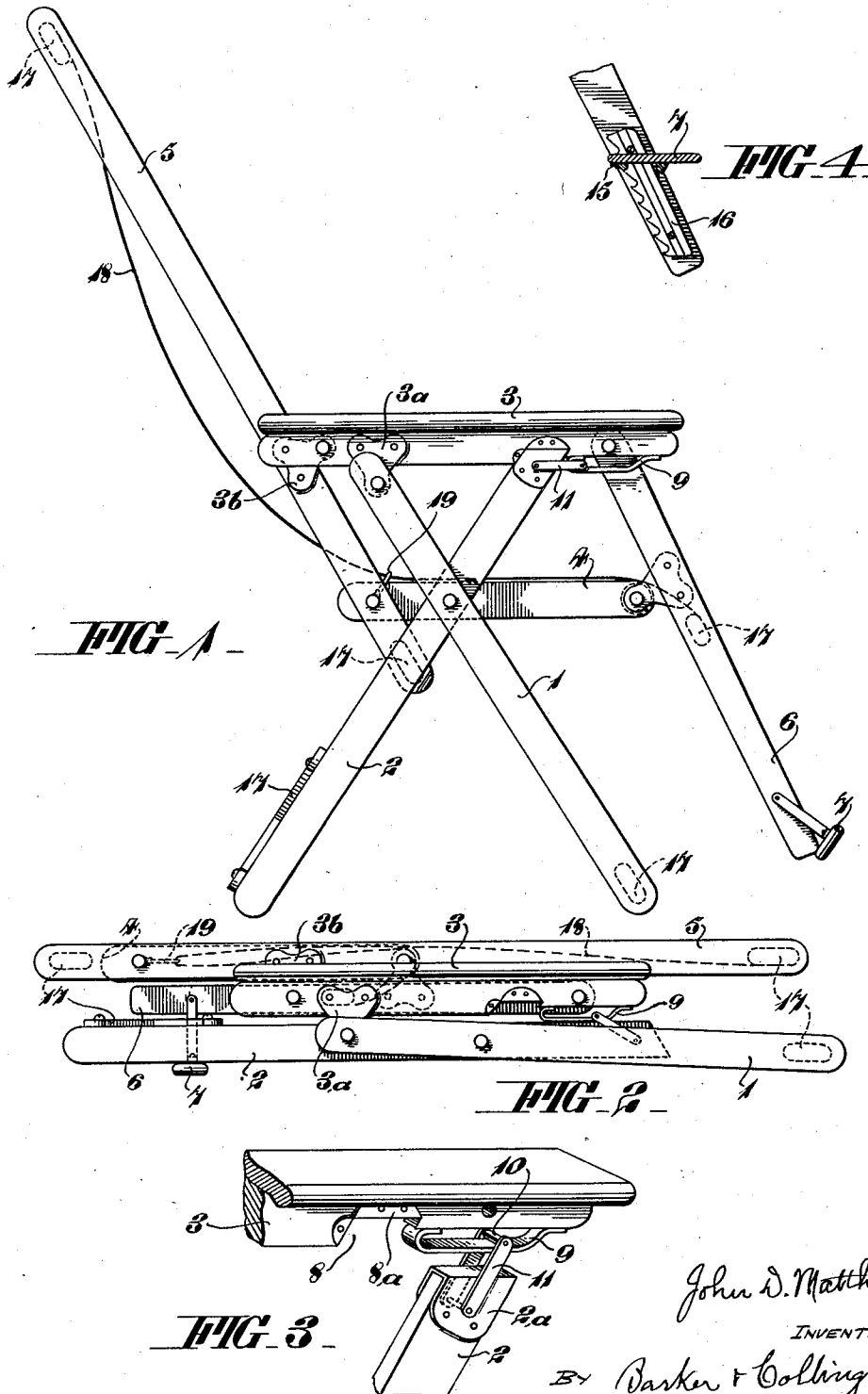
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J. D. MATTHEWS

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FOLDING CHAIR AND THE LIKE

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JOHN DURHAM MATTHEWS, OF NEWQUAY, CORNWALL, ENGLAND, ASSIGNOR TO TAYLOR BROS. (SANDIACRE) LIMITED, OF SANDIACRE, ENGLAND, A COMPANY OF GREAT BRITAIN

FOLDING CHAIR AND THE LIKE

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This invention comprises improvements in folding chairs and the like an important object of the invention being to provide a chair or seat having a back rest which can be moved to different degrees of inclination automatically by the person occupying said chair without the necessity of rising therefrom or manipulating any adjusting device.

Another object of the invention is to provide in a chair or the like improved means for collapsing same, and also novel means for converting same into a table or desk.

According to the present invention a folding chair or the like is provided wherein the seat is adapted to swing or pivot to and fro in parallel planes relatively to the chair legs or supports.

Each side of the chair frame embodies a parallelogram of which the seat frame constitutes a part adapted to swing or pivot relatively to the chair legs, another part of the parallelogram being extended upwards to form a back rest frame, said frame being tilted to varied degrees of inclination simultaneously with the movement of the seat frame.

Advantageously the front part of each parallelogram is extended downwards and provided with a foot rest, and the arrangement is such that a person occupying the seat can by applying forward pressure to the foot rest and rearward pressure to the back rest automatically swing the seat forwards and adjust the inclination of the back without rising from the seat.

Simple means are also provided for enabling the entire chair or seat to be collapsed and folded up when not in use.

For the purpose of more fully describing the nature of this invention reference will now be made to the accompanying drawings, wherein:—

Figure 1 illustrates in side elevation a folding chair in the erected position.

Figure 2 illustrates the chair when folded or collapsed.

Figure 3 is an enlarged detail view illustrating in perspective one method of connecting a chair leg to the chair arm so as to permit of folding thereof.

Figure 4 is a detail view illustrating in sectional side elevation a modified form of foot rest.

In one method of carrying out the invention the chair or the like is mounted upon intersecting legs 1, 2 which are pivotally connected together at the point of intersection, one pair of such legs being provided at each side of the chair. One leg 1 of each pair is pivoted at its upper end to a member 3a on a horizontal side arm or bar 3 a suitable distance above the seat frame 4, which side arms 3 constitute the arm rests, while the upper end of the other leg 2 is so connected to said side arm 3 or part thereon as to be disconnected therefrom at will for enabling the legs to be folded alongside each other at the sides when the chair is out of use.

Each upstanding side bar of the back rest frame 5 is pivoted to a plate or part 3b at the rear end of each side arm 3 and to the rear of each side of the seat frame 4 and extends below same, the said seat frame 4 and side arms 3 being pivotally connected at the front to the down bars 6 of the foot rest. In this way a frame of parallelogrammic formation is provided at each side of the chair, the seat connecting together the lower links of the parallelograms. Thus the portions of the back pieces 5 below the pivots 3b, and the upper portions of the down bars 6 that carry the foot rest, constitute frame pieces extending downwardly below the arm rests, to which the seat frame is pivotally connected at its ends.

The foot rest proper 7 is secured either pivotally or rigidly to portions of the aforesaid down bars 6 extending below the seat, and the arrangement is such that if a person seated on the chair bears back upon the back rest 5 and forwardly with the feet upon the foot rest 7, the seat 4 is swung forward horizontally and the back rest 5 is moved to any required degree of inclination.

One method of releasably connecting the legs in the erected position is by forming on the underside of each horizontal side arm 3 at a position towards its front end a recess 8 which is preferably lined with sheet metal 8a into which recess the upper end of the leg 2

is adapted closely to fit; said leg being preferably capped with metal as at 2a. That part of the side arm 3 extending in front of the recess 8 is preferably of reduced depth, and beneath said reduced part is secured a piece of strip metal 9 suitably spaced parallel with the underface of the arm 3 so as to provide a guide-way or run-way for a pin or roller 10 extending between parallel links 11 by means of which the leg 2 is connected to the arm 3.

When the chair is erected the upper end of leg 2 fits snugly within the recess 8 in the arm 3 as shown in Figure 1, the connecting links 11 being horizontal or approximately so. When the chair is to be folded the upper end of leg 2 is released from recess 8 and the roller or connecting pin 10 of the link 11 traversed forwardly along the run-way 9. When in this position the legs 1 and 2 can be brought into a horizontal position side by side as shown in Figure 2.

If desired the foot rest proper 7 may be connected to the down arms 6 therefore so that the height of said rest relatively to the arms can be adjusted; and in one such arrangement pins or the like 15 at each end of the rest may coact with the teeth of ratchet plates 16 secured to the down arms, (see Figure 4).

The intersecting legs at one side of the chair are preferably connected with those at the other side by cross pieces 17, as also may be the side bars of the back frame and of the foot rest.

Advantageously a canvas sheet 18 constituting the back rest proper is attached to the top cross bar of the back frame 5 and extends down to and forwardly over the seat frame 4 and if desired to the cross bar 17 of the foot rest frame 6, said canvas being of sufficient length to permit of the back being tilted to any required degree. A piece of cord 19 or the like secured at or near the rear end of each side of the seat frame 4 may be passed transversely over this canvas 18 to hold same down. A double thickness of canvas may be provided on the seat, and this may be accomplished by securing a second canvas piece across the seat frame. If desired the back frame 5 may be swung forwardly over the seat so as to lie approximately in the plane of the arm rests 3, and when so positioned a suitably shaped board or member may be fitted thereon so as to convert the chair into a table or desk.

The arm rests 3 are advantageously formed of substantial width at their upper parts and it will be appreciated that during the pivotal or swinging movement of the seat, back and foot rest, said arms are retained stationary and can thus be employed for supporting articles, if desired.

The releasable locking means for the chair legs are such as will permit of the chair when

erected being lifted and carried without collapsing.

What I claim is:

1. A folding chair or the like comprising in combination two pairs of intersecting foldable legs, arm rests connected with and supported by the upper ends of the legs, frame pieces pivotally connected to the arm rests and extending below the same, a seat portion pivotally connected at its ends to the said frame pieces whereby it is adapted to swing to and fro relatively to said legs and arm rest, one leg of each pair being pivotally connected with an arm rest while the remaining leg of each pair is releasably connected with said arm rest, so as to permit of the legs being folded, a back rest adapted to be tilted to varying degrees of inclination and connected with the said frame pieces so as to cause simultaneous movement thereof and of the seat portion with the back rest, one arm rest, at least, being formed with a socket-like recess into which fits the upper end of a leg, the leg being entirely releasable from such recess to permit folding of the chair, and means for guiding and directing the movements of the end of the leg after such release.

2. A folding chair or the like such as claimed in claim 1 with this addition, that the upper end of one leg of each intersecting pair is connected by a pivoted link to a runway carried by an arm rest and that said link is adapted to traverse said runway.

3. A folding chair or the like such as claimed in claim 1 with this addition, that the releasable leg which coacts with the recess in an arm rest is combined with a pivoted link that unites the leg with the arm rest and operates to retain the leg from complete disconnection from the arm rest.

JOHN DURHAM MATTHEWS.