July 15, 1958 G. V. SPENCER 2,843,188

FOLDING CHAIR

Filed May 27, 1957

Fig. 1

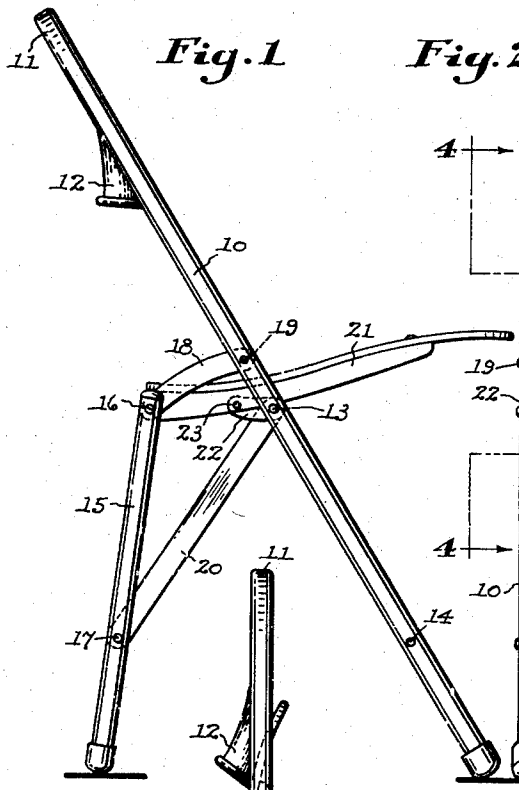


Fig. 2

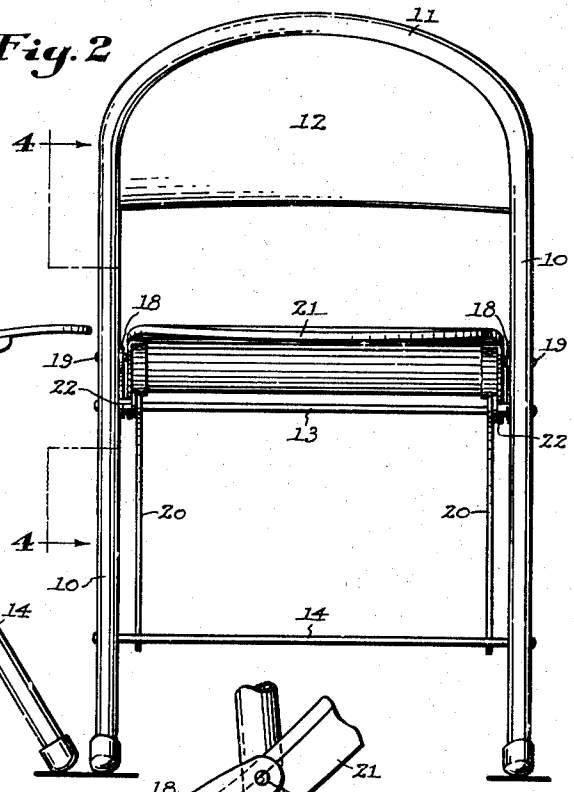


Fig. 3

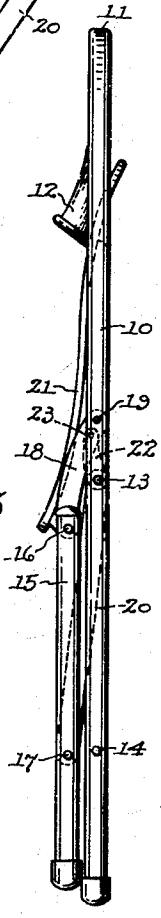
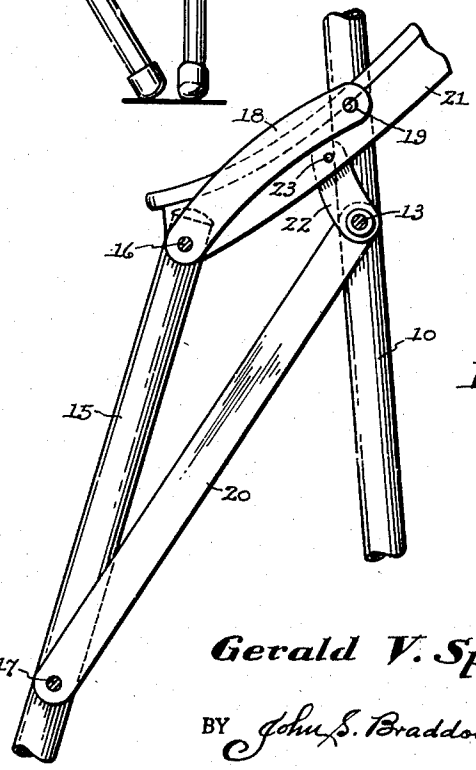


Fig. 4



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FOLDING CHAIR

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3 Claims. (Cl. 155—142)

The present invention relates to folding chairs.

The primary objects of the invention are to provide a steel folding chair having a novel arrangement of parts whereby the chair seat is "non-jackknifing," that is to say a folding chair in which the seat will not collapse if stood upon or used in other ways than its primary intended use as a chair; to provide such a chair which folds "naturally," by tipping the chair slightly forward and then lifting the seat at its front edge; and in general to provide such a folding chair which is sturdy in construction, reasonably economical in manufacture, and neat in appearance.

An illustrative embodiment of the invention is shown in the accompanying drawings, wherein:

Figure 1 is a side elevational view of a folding chair constructed according to the invention, in unfolded condition for use;

Figure 2 is a front elevational view of the same;

Figure 3 is a side elevational view of the chair in folded condition for transport or storage; and

Figure 4 is an enlarged fragmentary sectional view of parts thereof taken on line 4—4 of Figure 2 and showing the parts in semi-folded positions.

Referring now in detail to these drawings, the chair there shown generally comprises a front frame of tubular metal bent to form spaced front legs **10** connected at their upper ends by a back support **11** to which is secured a back panel **12**. A horizontal front tie-bar **13** in the form of a metal rod connects the front legs at the approximate seat level of the chair, and a horizontal strengthening rod or strut **14** connects the front legs near the lower ends thereof. The spaced, tubular metal rear legs **15** of the chair are connected by a horizontal upper rear tie-bar **16** at the approximate seat level of the chair and by a horizontal lower rear tie-bar **17** spaced a substantial distance below the upper rear tie-bar **16**, said tie-bars **16**, **17** being in the form of metal rods. The rear legs **15** terminate at their upper ends only slightly above the upper rear tie-bar **16**.

The front legs **10** and rear legs **15** are connected by curved upper links **18** having their rear ends pivotally mounted on the upper rear tie-bar **16** and having their front ends pivotally connected to the front legs **10** by rivets **19** located above the front tie-bar **13**, and the front and rear legs are also connected by lower links **20** having their rear ends pivotally mounted on the lower rear tie-bar **17** and having their front ends pivotally mounted on the front tie-bar **13**.

The chair seat **21** is pivotally mounted in the rear on the upper rear tie-bar **16**, and is adapted for support at its middle on the front tie-bar **13** in the unfolded, use condition of the chair seen in Figures 1 and 2. Auxiliary links **22** have their front ends pivotally mounted on the front tie-bar **13** and have their rear ends pivotally connected by rivets **23** to opposite sides of the seat **21** at points between the front tie-bar **13** and the upper rear tie-bar **16** in the unfolded condition of the chair.

The chair is folded from its use condition seen in Figure 1 to its non-use condition seen in Figure 3 by tipping the chair slightly forwardly and lifting the seat at its front edge. During this folding movement the auxiliary links **22** guide the seat **21** to its folded position between and substantially parallel to the front legs **10**, and the upper links **18** and lower links **20** guide the rear legs **15** to folded positions alongside the front legs **10**. When the chair is unfolded the links **18**, **20** and **22** operate rveersely to move the parts to their unfolded positions.

It will be seen that when the chair is in its unfolded condition, the forward part of the seat **21** is supported on the front tie-bar **13** and thus is supported by the front legs **10**. The rearward part of the seat **21**, being directly connected to the upper rear tie-bar **16** is positively supported by the rear legs **15** so that there is no possibility of the chair's "jackknifing" or collapsing even if the seat should be stood upon in the rear.

While but one specific embodiment of the invention has been herein shown and described it will be understood that numerous details may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

I claim:

1. In a folding chair: spaced front legs; spaced rear legs terminating at their upper ends at the approximate seat level of the chair; a seat having its rear corners pivotally connected to the rear legs near said rear legs' upper ends and adapted for support on the front legs in the unfolded condition of the chair; upper and lower links connecting the rear legs and the front legs whereby said legs are interrelatively movable between an unfolded position of use and a folded position with the rear legs lying alongside the front legs; and auxiliary links connecting the front legs and the seat whereby lifting of the seat at its front edge effects folding movement of the legs and lowering of the seat at its front edge effects unfolding movement of the legs.

2. In a folding chair: spaced front legs; spaced rear legs terminating at their upper ends at the approximate seat level of the chair; a seat having its rear corners pivotally connected to the rear legs near said rear legs' upper ends; means on the front legs for supporting the forward part of the seat in the unfolded condition of the chair; upper links having their rear ends pivotally mounted on the rear legs near said rear legs' upper ends and having their front ends pivotally connected to the front legs above the seat level of the chair; lower links having their rear ends pivotally mounted on the rear legs a substantial distance below said rear legs' upper ends and having their front ends pivotally mounted on the front legs at the approximate seat level of the chair; and auxiliary links having their front ends pivotally mounted on the front legs and having their rear ends pivotally connected to opposite sides of the seat at points between the front legs and the rear legs in the unfolded condition of the chair.

3. In a folding chair: spaced front legs connected by a horizontal front tie-bar at the approximate seat level of the chair; spaced rear legs connected by a horizontal upper rear tie-bar at the approximate seat level of the chair and by a horizontal lower rear tie-bar a substantial distance below said upper rear tie-bar, said rear legs terminating at their upper ends only slightly above the upper rear tie-bar; a seat pivotally mounted on the upper rear tie-bar and adapted for support by the front tie-bar in the unfolded condition of the chair; upper links having rear ends pivotally mounted on the upper rear tie-bar and having their front ends pivotally connected to the front legs above the front tie-bar; lower links having their rear ends pivotally mounted on the lower rear tie-

bar and having their front ends pivotally mounted on the front tie-bar; and auxiliary links having their front ends pivotally mounted on the front tie-bar and having their rear ends pivotally connected to opposite sides of the seat at points between the front tie bar and the upper rear tie-bar in the unfolded condition of the chair.

References Cited in the file of this patent

UNITED STATES PATENTS

2,177,186	Nordmark	Oct. 24, 1939
2,238,817	Morgan	Apr. 15, 1941