April 21, 1953 R. M. GRAFFIUS ET AL 2,635,676

FOLDING CHAIR

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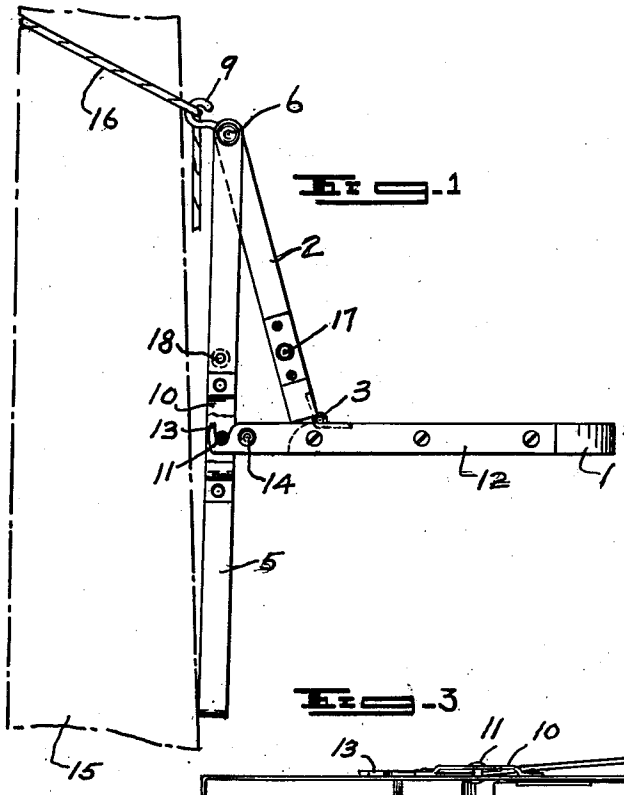


FIG. 1

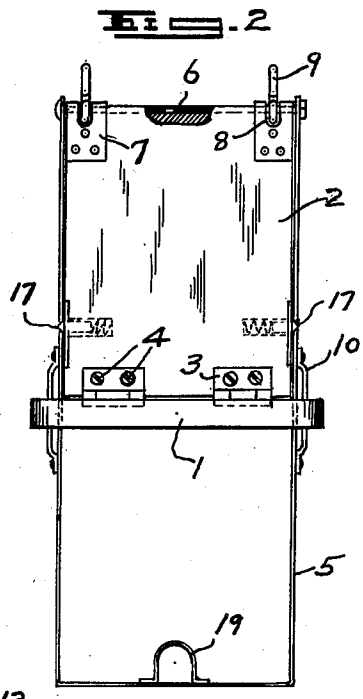


FIG. 2

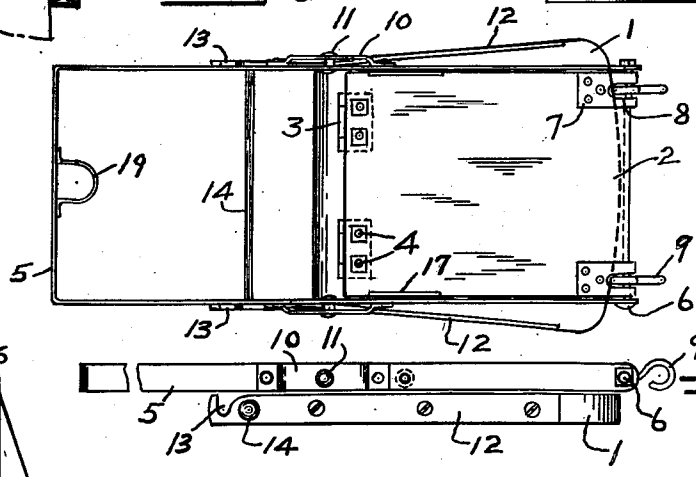


FIG. 3

FIG. 4

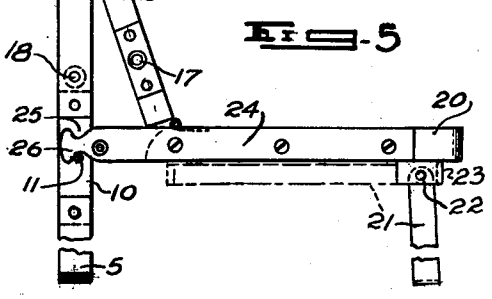


FIG. 5

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FOLDING CHAIR

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4 Claims. (Cl. 155—83)

1

This invention relates to a folding chair, and while primarily designed and intended for the convenient use of hunters, fishermen, campers, and the like, it will be obvious that the chair may be employed for any other purposes wherein it is found to be applicable.

Important objects and advantages of the invention are to provide a chair of the character described, which may be readily and conveniently suspended from a tree, pole, wall, or any other vertical support, which may be compactly collapsed to facilitate its transportation and storage, which is simple in its construction and arrangement, durable and efficient in its use, attractive in appearance, and comparatively economical in its manufacture.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the novel construction, combination and arrangement of parts herein specifically described and illustrated in the accompanying drawing, but it is to be understood that changes in the form, proportions and details of construction may be resorted to that come within the scope of the claims hereunto appended.

In the drawing wherein like numerals of reference designate corresponding parts throughout the several views:

Figure 1 is a side elevational view of a folding chair, constructed in accordance with the invention, and illustrating the suspension of the chair from a vertical support.

Figure 2 is a front elevational view of the improved chair in the erected position.

Figure 3 is a plan view of the chair in the collapsed position.

Figure 4 is a side elevational view of the chair in the collapsed position.

Figure 5 is a side elevational view of a modified form of seat embodying the present invention.

Referring in detail to the drawing, the improved folding chair comprises a seat 1, which has its rear end connected to the lower end of a back 2 by a pair of hinges 3. The hinges are secured by screw bolts 4 as they must sustain considerable weight in the use of the chair when the latter is suspended from a supporting structure.

A substantially U-shaped bracing frame 5 has the upper free ends thereof pivotally connected at the upper ends of respective side edges of the back 2 by means of a bolt 6, which extends through said upper ends of the bracing frame and is embedded in the upper edge of the back.

2

The bolt 6 is secured in position by a pair of substantially U-shaped straps 7, which overlap respective ends of the top edge of the back and respective ends of the bolt. The straps are permanently secured in position to the back 2, and each is formed with a recess 8, through which a hook 9 is pivotally connected to respective ends of the bolt.

A cleat 10 is fixed against the outer side of each of the vertical members of the bracing frame 5. The cleats are disposed intermediate of the lengths of said vertical members and in spaced parallel relation to the latter. A transversely extending holding pin 11 is fixed in each of the cleats and in the adjacent portion of respective vertical members of the bracing frame 5.

A side bar 12 is permanently secured against each side edge of the seat 1 and projects beyond the rear end of the latter. The free rear end of each of the side bars is formed with a substantially hook-shaped notch 13 which opens upwardly and is detachably engageable in respective cleats 10 and on respective holding pins 11, as clearly illustrated in Figure 1, when the improved chair is in the erected position. A reenforcing rod 14 is fixed in the projecting ends of the side bars 12 and is disposed adjacent to and inwardly of the notches 13.

To suspend the chair in the erected position for use, the free ends of the side bars 12 are inserted into the cleats 10 and the upwardly opening notches 13 are engaged on the holding pins 11. The upper end of the bracing frame 5 is secured, together with the back 2, at the desired height to a tree trunk 15, or other supporting structure, by means of a rope 16, chain, or any other suitable type of flexible member. The rope surrounds the tree trunk and is secured to the hooks 9 to carry the chair in the erected suspended position. The bracing frame 5 extends a considerable distance below the seat 1 and the cross member of the bracing frame rests against the tree trunk, as clearly shown in Figure 1.

To collapse the chair, as illustrated in Figures 3 and 4, the back 2 is shifted on the hinges 3 to position the back flatly against the top surface of the seat 1. Each side edge of the back is provided with an automatically operable, spring controlled locking element 17, which is engageable in a countersunk aperture 18 provided therefor in respective vertical members of the bracing frame 5. When the chair is in the collapsed position, the locking elements 17 engage in the apertures 18 and hold the bracing frame 5 in parallel relation to the back 2 until the locking elements

are forcibly released from their engagement in the apertures. While the locking elements are engaged in the apertures, the separating movement of the seat 1 and back 2 is limited by the abutment of the reenforcing rod 14 against the bracing frame 5.

A loop member 19 is fixed centrally on the inner side of the cross member of the bracing frame 5 for the reception of a carrying sling, or the like, to properly and better balance the collapsed chair while the latter is being toted from place to place by the user.

It will here be noted that, while the bracing frame 5 and the side bars 12 are herein illustrated as being constructed of metal strap material, it will be apparent that said bracing frame and side bars may be made from angle iron or any other suitable structural shape without departing from the spirit of the invention.

Figure 5 illustrates a modified form of seat structure comprising a seat 20 provided with a substantially U-shaped front leg member 21, which is pivotally connected, as at 22, to a pair of brackets 23, which are secured against the underside of the seat 20. The seat 20 is provided with a pair of side bars 24 which project rearwardly beyond the rear end of said seat. The rear free end of each of the side bars 24 is formed with an upwardly opening notch 25 and with a downwardly opening notch 26.

When the chair with the modified form of seat 20 is suspended from a vertical support, the upwardly opening notches 25 of the side bars 24 are engaged on the holding pins 11 carried by the bracing frame 5 in the manner herein before described. When the chair is to be used on a flat surface in the usual manner, the leg 21 is projected, and the downwardly opening notches 26 of the side bar 24 are engaged on the holding pins 11. The leg 21 may be folded against the underside of the seat 20 when the chair is collapsed or when the chair is supported in the suspended position.

The present invention provides a most efficient device of its kind, which may be economically constructed, and successfully employed for the purposes and in the manner herein set forth.

What we claim is:

1. A folding chair for suspension from a vertical support, comprising a seat, a back hingedly connected with said seat, a substantially U-shaped bracing frame having the upper ends thereof pivotally connected at the upper ends of the side edges of said back, a pair of side bars secured to respective side edges of said seat and projecting beyond the rear end of the latter, means formed at the rear free end of each of said bars for detachably attaching the latter to said frame, a pair of connecting elements pivotally connected at the upper end of said back, and a flexible member connecting with said elements and with the support for suspending the chair from said support.

2. A folding chair for suspension from a vertical support, comprising a seat, a back having the lower end thereof hingedly connected with the rear end of said seat and being foldable flatly against the latter, a substantially U-shaped bracing frame having the upper ends thereof pivotally connected at the upper ends of respective side edges of said back and projecting a considerable distance below said seat, a pair of side bars secured at respective side edges of said seat and projecting beyond the rear end of the latter, interengaging means carried by said frame and by said bars for detachably attaching the rear free ends of said bars to said frame, a pair of connecting elements pivotally connected at the upper end of said back, and a flexible member connecting with said elements and with the support for suspending the chair from said support.

3. A folding chair for suspension from a vertical support, comprising a seat, a back hingedly connected with said seat, a substantially U-shaped bracing frame having the upper ends thereof pivotally connected at the upper ends of the side edges of said back and depending below said seat, a pair of side bars secured to respective side edges of said seat and projecting beyond the rear end of the latter, means formed at the rear end of each of said bars for detachably attaching the latter to said frame, a pair of connecting elements connected with the upper end of said back, a flexible member connecting said elements with the support, and a supporting leg pivotally connected adjacent to the front end of said seat and being foldable against the underside of the latter.

4. A folding chair for suspension from a vertical support comprising, in combination, a seat, a back having the lower end thereof hingedly connected with the rear end of said seat and being foldable flatly against the top of the latter, a substantially U-shaped bracing frame having the upper ends thereof pivotally connected at the upper ends of respective side edges of said back and projecting a considerable distance below said seat, means carried by said back and engaging said frame for holding said frame in parallel relation to said back when the chair is in the folded position, a pair of side bars secured to respective side edges of said seat and projecting beyond the rear end of the latter, a reenforcing rod secured to said pair of side bars adjacent to the free rear ends of the latter, interengaging means carried by said frame and by said bars for detachably attaching the rear free ends of said bars to said frame for securing the chair in the erected position, a pair of connecting elements pivotally connected at the upper end of said back at respective ends of the top edge of said back, and a flexible member for connecting said elements to the support for suspending the chair from the support.

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