

Feb. 26, 1952

W. H. SMITH

2,587,543

PORTABLE FOLDABLE CHAIR

Filed March 31, 1950

2 SHEETS—SHEET 1

FIG. 2.

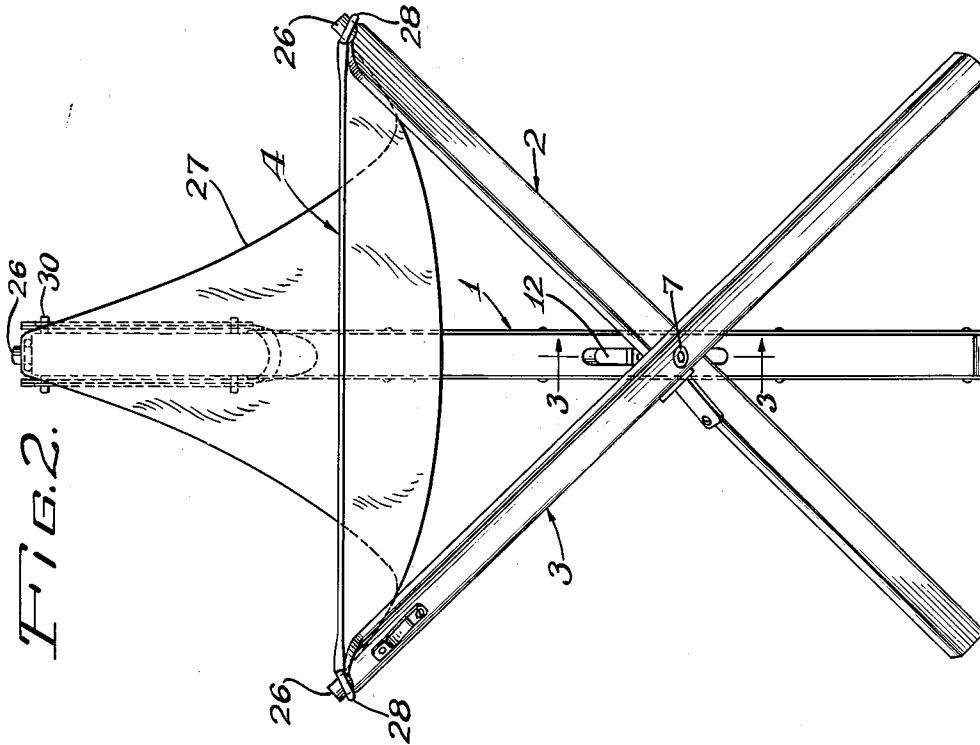
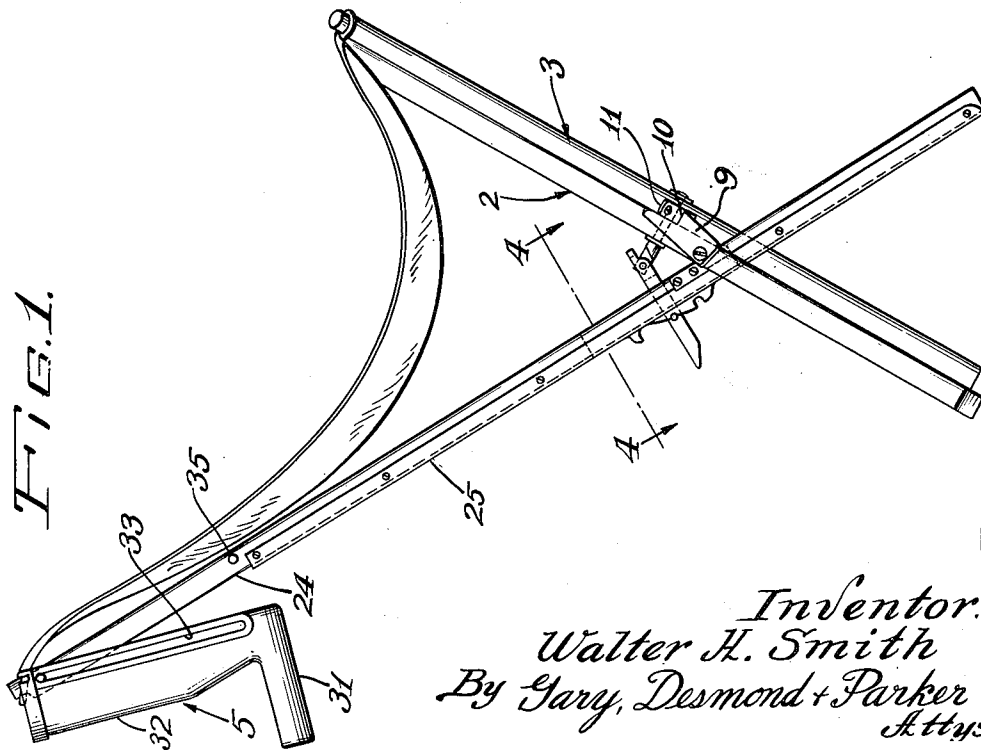


FIG. 1.



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2 SHEETS—SHEET 2

FIG. 3.

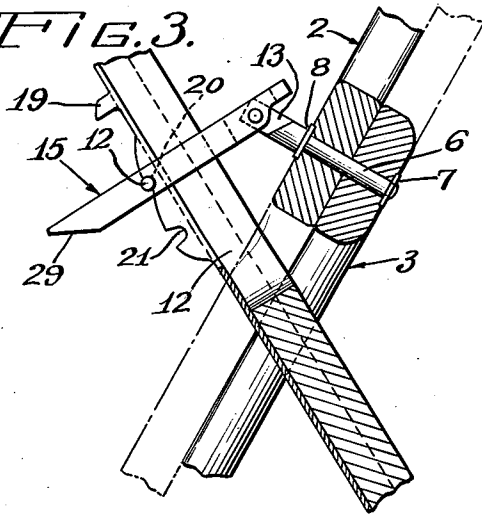


FIG. 4.

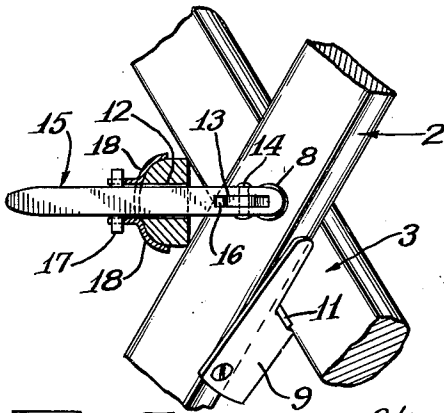


FIG. 7.

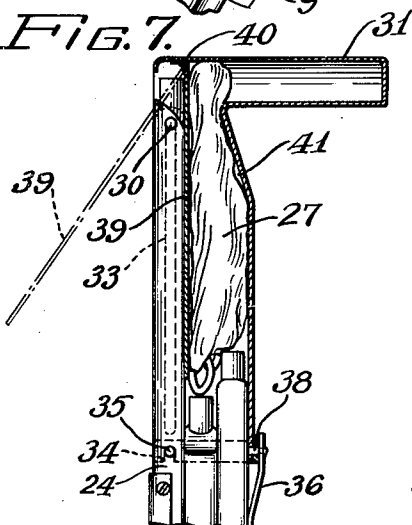
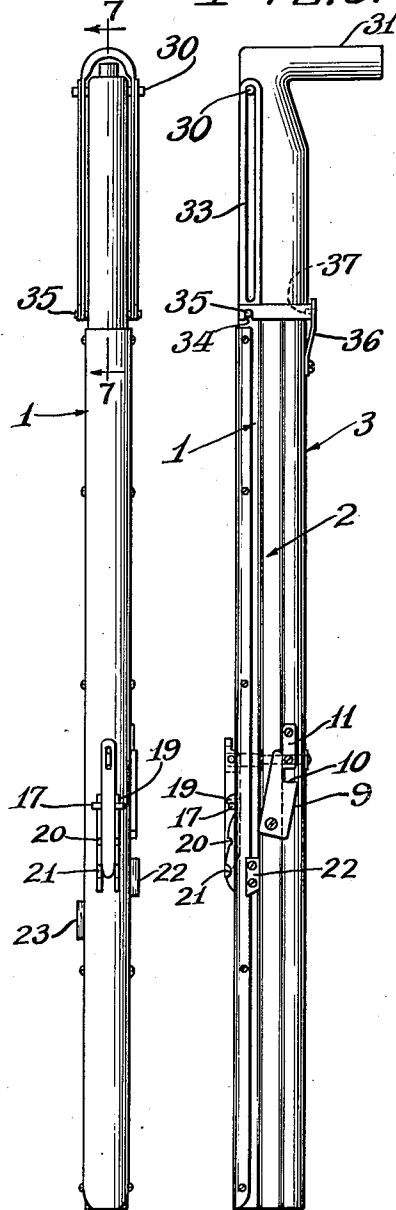


FIG. 5. FIG. 6.



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PORTABLE FOLDABLE CHAIR

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Application March 31, 1950, Serial No. 153,143

8 Claims. (Cl. 155—136)

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This invention relates to improvements in a portable folding chair and refers particularly to a portable folding chair construction which can be folded into small compass; is light in weight; is rugged and strong and can be folded and unfolded quickly and conveniently.

One of the important features of the invention resides in the provision of a portable, strong, light weight folding chair which comprises a seat having a back, the seat and back including a suspended fabric which renders the chair exceedingly comfortable.

Another important feature of the invention resides in a portable folding chair having a seat portion and back portion which are supported by a tripod construction which gives stability to the chair.

Other objects and advantages of the invention will be apparent from the accompanying drawings and following detailed construction.

In the drawings, Fig. 1 is a side elevational view of my portable folding chair.

Fig. 2 is a front elevational view of the chair shown in Fig. 1.

Fig. 3 is an enlarged detailed sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is an enlarged sectional view taken on line 4—4 of Fig. 1.

Fig. 5 is a front elevational view of the chair in collapsed or folded position.

Fig. 6 is a side elevational view of the chair in collapsed or folded position.

Fig. 7 is an enlarged detailed sectional view taken on line 7—7 of Fig. 5.

Referring in detail to the drawings, the portable chair comprises essentially three legs 1, 2 and 3, a fabric seat and back 4 and a combination handle and housing 5, the parts being so related and secured together that they may be extended or opened to form a seat and back or may be folded into small compass of walking stick form.

The legs 2 and 3 are of substantially the same length and are pivoted together intermediate their length by a pivot pin 6 which carries a head 7 at one end and a collar 8 intermediate the length of the pin, the head and collar bearing upon members 3 and 2 respectively to hold the members in contiguous relationship adjacent the pivot. When the chair is unfolded the legs 2 and 3 are disposed in the form of an X and are maintained at a desired angular relationship with respect to each other by means of a lug 9 secured to the leg 2, said lug being formed with a shoulder 10 (Figs. 1 and 6) which engages with

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an edge of plate 11 secured to the side of leg 3. When the legs are in this described position, shown best in Fig. 2, said legs are prevented, by weight which may be placed upon the chair, from collapsing.

Coacting with the legs 2 and 3 when the chair is in unfolded position is the leg 1 which, together with legs 2 and 3 forms a tripod. The leg 1 is provided with an elongated slot 12 intermediate the length of the leg, the assembly being such that said slot is normally positioned adjacent the pivot of legs 2 and 3. Pivot pin 6 beyond collar 8 terminates in a tongue 13 which is pivoted, as at 14, to a locking bar 15, said bar being provided with a slot 16 in which tongue 13 is positioned. The face end of bar 15 protrudes through slot 12 in leg 1, bar 15 carrying a transverse pin 17 which, among its functions, prevents unintended removal of bar 15 from slot 12.

A pair of similar guide plates 18 are mounted, in spaced relationship with respect to each other, upon leg 1 adjacent the opposite defining sides of slot 12. Each plate is provided with a flange so formed as to have a projection 19, a notch 20 and notch 21 spaced from each other and the flanges of each plate are so disposed with respect to each other as to have corresponding parts transversely opposite each other. The arrangement is such that pin 17, depending upon the folded or unfolded position of the chair, is positioned adjacent projections 19 (Figs. 5 and 6) or is disposed in either pair of notches 20 or 21 (Figs. 1 and 3).

In unfolded position bar 15 protrudes transversely through slot 12 and pin 17 registers with either notches 20 or 21 depending upon the desired angular relationship of leg 1 with respect to legs 2 and 3. To render the three-way joint thus formed more rigid stops 22 and 23 are positioned upon leg 1 which are respectively engaged by the side edges of legs 2 and 3.

Leg 1 is intended to comprise the rear support for the chair and is extended above legs 2 and 3, as shown best at 24 in Figs. 1 and 2. The extension 24 thus functions as the support for the back of the seat. The leg 1 may carry a reinforcement 25 to further strengthen said back support. At the upper ends of legs 1, 2 and 3, ring posts 26 are carried and a substantially triangular shaped fabric 27 having post-engaging rings 28 carried at the corners thereof is adapted to be suspended from the ends of the legs, the corner rings 28 being removably threaded upon the posts 26.

The device has heretofore been described essen-

tially in its unfolded position. To fold the device, the fabric seat 27 is first removed from the posts 26; legs 2 and 3 are then swung about the pivot 6 to bring the post-ends of the legs adjacent each other, as shown best in Fig. 7, and simultaneously the legs 2 and 3 are swung about pivot 14 to bring legs 2 and 3 and leg 1 into parallel planes. The projecting end of pivot pin 6 is then moved into slot 12 positioning bar 15 exteriorly of said slot. Bar 15 is then swung about pivot 14 in a counterclockwise direction, as viewed in Figs. 1 and 3, until bar 15 occupies a position slightly inclined with respect to leg 1 and between the flanges on the spaced plates 18. Legs 2 and 3 and leg 1 are then moved longitudinally in opposite directions with respect to each other until pin 17 abuts the spaced projections 19. This movement brings the tapered portion 29 of bar 15 into the end of slot 12 and, hence, the bar 15 becomes loosely wedged between the flanges of plates 18 and the three legs 1, 2 and 3 are removably secured together in plane-parallel relationship.

The upper end of the back support 24 carries a transverse pin 30. The member 5 comprises a hollow handle portion 31 and a hollow housing portion 32. The housing portion 32 is provided with oppositely positioned elongated slots 33 in which the opposite ends of pin 30 engage. Hence, the member 5 is swingably and slidably movable with respect to the back support 24.

When the parts have been assembled in folded position as has been hereinbefore described, member 5 may be moved slidably in embracing relationship with the back support 24 and the upper ends of legs 2 and 3, as shown best in Fig. 7. The lower edge of the housing 32 is provided with notches 34 which engage the protruding ends of a pin 35 transversely carried by the back support 24. A swingable spring clip 36 is carried by leg 3 and an aperture 37 is provided in the housing 32 adjacent its lower edge. Engagement of a pin 38 carried by the spring clip 36 in aperture 37 serves to lock the member 5 upon the upper ends of the folded legs.

A plate 39 is hinged at 40 to the inner upper wall of the handle portion 31, said plate extending downwardly adjacent the ends of legs 2 and 3. A space 41 is thus provided for the reception and storage of the folded fabric seat 27, the plate 39 when the member 5 is in embracing position being disposed adjacent the back support 24. When the member 5 is moved upwardly away from the ends of the legs plate 39 may be swung outwardly, as shown in broken lines in Fig. 7, whereby seat fabric 27 may be removed. In unfolded position, the member merely hangs upon pin 30, as shown best in Figs. 1 and 2.

The legs 1, 2 and 3 although shown as being constructed of wood may be constructed of metal such as aluminum or magnesium and although shown and described as being of solid construction, may, of course, be tubular. Such modifications and other obvious adaptations and modifications are contemplated in my invention as being well within the province of any one skilled in the art.

I claim as my invention:

1. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length, a locking bar pivotally connected to said pivot pin, a third leg having an upper and lower end provided intermediate its length with an elongated slot in which said locking bar is posi-

tioned, means upon said locking bar for engaging said third leg to secure said legs together in pivotal fashion intermediate their length to form a tripod when the legs are disposed angularly to each other about the respective pivots, stop means upon said third leg for engaging each of said other legs, stop means upon one of said pair of legs for engaging the other leg of said pair, and a flexible fabric seat suspended from the spaced upper ends of said legs.

2. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length, an end of said pivot pin projecting from said legs, a locking bar pivotally connected to the projecting end of said pivot pin, a third leg having an upper and lower end provided intermediate its length with an elongated slot in which said locking bar is positioned, anchor means disposed upon said third leg adjacent said slot, means upon said locking bar for engagement with said anchoring means to secure said legs together in pivotal fashion intermediate their length and to form a tripod when the legs are disposed angularly to each other about the respective pivots, stop means upon said third leg for engaging each of said other legs, stop means upon one of the legs of said pair of legs for engaging the other leg of said pair, and a flexible fabric seat removably suspended from the spaced upper ends of said legs.

3. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length, a locking bar pivotally connected to said pivot pin, a third leg of greater length than each of said other legs having an upper and lower end provided intermediate its length with an elongated slot in which said locking bar is positioned, said slot being closer to said lower end than to said upper end, means upon said locking bar for engaging said third leg to secure said legs together in pivotal fashion intermediate their length to form a tripod when the legs are disposed angularly to each other about the respective pivots, stop means upon said third leg for engaging each of said other legs, stop means upon one of said pair of legs for engaging the other leg of said pair, and a flexible fabric suspended from the spaced upper ends of said legs to form a seat and back for said chair.

4. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length, a locking bar pivotally connected to said pivot pin, a third leg having an upper and lower end provided intermediate its length with an elongated slot in which said locking bar is positioned, means upon said locking bar for engaging said third leg to secure said legs together in pivotal fashion intermediate their length to form a tripod when the legs are disposed angularly to each other about the respective pivots, stop means upon said third leg for engaging each of said other legs, stop means upon one of said pair of legs for engaging the other leg of said pair, and a substantially triangular flexible fabric seat suspended at its corners from the spaced upper ends of said legs.

5. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length in plane-parallel relationship, said pin having a portion extending laterally from said legs, a locking bar pivotally connected to the extending portion of said pivot pin, a third leg

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having an upper and lower end provided intermediate its length with an elongated slot in which said pivot pin extension is positioned, spaced flanged means upon said third leg adjacent said slot, means upon said locking bar for engaging said flanged means to secure all of said legs together in plane-parallel fashion, and tubular means carried by said third leg for embracing the upper portions of said legs to hold the same in longitudinally parallel relationship.

6. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length in plane-parallel relationship, said pin having a portion extending laterally from said legs, a locking bar pivotally connected to the extending portion of said pivot pin, a third leg having an upper and lower end provided intermediate its length with an elongated slot in which said pivot pin extension is positioned, spaced flanged means upon said third leg adjacent said slot, means upon said locking bar for engaging said flanged means to secure all of said legs together in plane-parallel fashion, and tubular handle means carried by said third leg for telescopically engaging the upper portions of said legs to hold the same in longitudinally parallel relationship.

7. A folding chair comprising a pair of legs each having upper and lower ends, a pivot pin securing said legs together intermediate their length in plane-parallel relationship, said pin having a portion extending laterally from said legs, a locking bar pivotally connected to the extending portion of said pivot pin, a third leg having an upper and lower end provided intermediate its length with an elongated slot in

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which said pivot pin extension is positioned, spaced flanged means upon said third leg adjacent said slot, means upon said locking bar for engaging said flanged means to secure all of said legs together in plane-parallel fashion, and tubular handle means carried by said third leg for telescopically engaging the upper portions of said legs to hold the same in longitudinally parallel relationship and means carried by one of said legs for locking said handle means in telescopic position upon the upper portions of said legs.

8. A folding chair comprising three legs, a pivot pin for pivotally securing two legs together in plane-parallel relationship, an extension on said pivot pin, a link pivotally connected to said extension, means upon said link for pivotally and slidably engaging said link in an elongated aperture provided in the third leg whereby the third leg is pivotally secured to the other two legs, and has limited longitudinal movement relative thereto, means carried by certain of said legs for locking engagement with adjacent legs to lock said legs together in a predetermined angular relationship, and a flexible fabric seat carried by the ends of said legs.

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