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R. KAY

2,766,813
COLLAPSIBLE CHAIR
Filed Nov. 22, 1954

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Fig. 3.
$A_{B Y}$ Reuben Kay
$B Y$ Reuben Kay
any cam stage
agent

## 2,766,813

COLLAPSABLE CHAIR
Reuben Kay, Omaha, Nebr.
Application November 22, 1954, Serial No. 470,259
1 Claim. (Cl. 155-141)

This invention relates to portable chairs and more particularly to a collapsable chair in combination with a walking cane.
The particular object of this invention is to provide a collapsable chair pivotally attached to an upright walking cane portion whereby the chair portion may be folded compactly against the cane portion for being easily transported from one plane to another.
Another object of this invention is to provide a portable and collapsable chair which is adapted to be folded into a compact package which takes up the minimum of space.

Another object of my invention is to provide a collapsable chair in combination with a walking cane whereby at times when the chair is not in an operating position the device may be used as a walking stick.

Other and further objects and advantages of the present invention will be apparent from the following detailed description, drawings and claim, the scope of the invention not being limited to the drawings themselves as the drawings are only for the purpose of illustrating a way in which the principles of this invention can be applied.

Other embodiments of the invention utilizing the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claim.

In the drawings:
Figure 1 is a side elevation of the combination walking cane and collapsable chair of my invention.
Figure 2 is a front elevation of the cane and chair combination.
Figure 3 is a view of the chair in a folded position for carrying as a cane. Dotted lines show the canvas seat portion wrapped around the chair and the cane. The canvas seat portion is provided with snap-fasteners and is used to retain the device in a closed position when used as a cane.

Figure 4 is a detail showing the cross bracing strut which holds the chair rigid while it is in use as a chair.

Figure 5 is an isometrical view of the rung joint locking means which hold legs in a rigid operating position for use as a chair.

Figure 6 is a view of the canvas seat portion, parts of the canvas being broken away for clarity.

The chair has two conventional forward legs 14 and 16 which are normally disposed upright when the chair is used in the sitting position shown in Figure 1. The forward legs 14 and 16 are preferably of a height so as to permit a person to sit straddling one of the legs if he wishes although the chair is also of a width such that a normal person can be comfortably seated with his legs extending outwardly between the uppermost ends of the legs 14 and 16.

The chair also has two rearward legs 10 and 12. The rearward legs are preferably of a considerably greater height than the forward legs so as to support a later described back rest portion of the chair. However it

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will be understood that the rearward legs fit the same height as the forward legs and that the chair would still have utility although it would be less comfortable being backless.
One of the rearward legs 10 is preferably much higher and longer than the other rearward leg 12 whereby the upper end of the leg 12 has a rearwardly curved portion 13 forming a cane handle. This has the advantage in that when the chair is collapsed as later described into a relatively elongated device with respect to its width, then it can be handy as a cane and also the handle 13 can be very convenient for carrying the chair even though the person may not want to use it as a cane.
The chair legs are pivotally secured together by jointed rungs 20. The rungs 20 can also be called foldable linkage members. Rungs 20 have rearward sections 22 and forward sections 24 . The rearward sections 22 are preferably longer than the forward sections 24 , so as to make it possible for the forward legs 14 and 16 to fold upwardly and against the rearward cane legs 10 in positions disposed above the lower end of the cane leg 10, and is best seen at the bottom of Figure 1.
The foldable linkage members or foldable rungs 20 are provided with elbow joints 25 including pivot members 23 whereby they fold upwardly but not downwardiy.

The foldable linkage members or jointed rungs 20 are eight in number preferably. One group is disposed extending in horizontal plane around the upper end of the seat portion of the chair being connected to the upper end of the forward legs 14 and 16 at points spaced a short distance below the upper ends. The upper four foldable linkage members 20 extend across the front, back and sides of the chair and are connected by rivets 32 to the chair legs at the ends of the foldable linkage members or rungs 20 so as to provide pivotal connection at these ends.

The lower group of linkage members or rungs 20 is disposed spaced a short distance above the bottom of each leg and are also preferably disposed in horizontal plane extending across the front, back and sides of the chair and likewise connected by rivets 32 .

It will be understood that while it is less desirable, the foldable linkage members or foldable rungs 20 can be provided with only simple pivotal connections and without the elbow joints 25 and the chair will still function.

Cross bracing struts 30 are further provided. These struts extend respectively one from each leg to an adjacent leg. They are called cross braces or cross linkage members 30 and are so called because they extend from a higher point on one leg to a lower point on another, preferably at an angle of approximately $30^{\circ}$.

The bracing linkages or struts 30 are each attached at one end by means of a rivet 32 to a respective leg for providing a pivotal connection. The opposite end of each member 30 is provided with a notch 34 best seen in Figure 4 for hooking about an outstanding rivet 40, the rivet 40 being disposed in respective positions in other legs whereby when the bracing linkages 30 are hooked about the rivets 40 they are in the inclined position described.

The cross linkage members or struts 30 are preferably four in number disposed at the front, rear and sides of the chair.
The chair is further provided with a seat portion 42 which can otherwise be called a foldable covering portion. The foldable covering portion 42 is provided with two sections, a lower horizontal section for seating and an upper almost vertically extending section for functioning as a back rest.

The covering portion 42 is provided with six grommets 46 and $46^{\prime}$ and the covering portion 42 is of a rectan-
gular shape with grommets 46 and $46^{\prime}$ in each corner and two grommets 46 on the sides thereof.

The corner grommets 46 at the forward and lower end of the covering portion 42 are adapted to receive the upper ends of the forward chair legs 14 and 16. The rearward grommets 46 and $46^{\prime}$ at the upper end of the covering portion 42 are adapted to receive the upper end of one rearward leg 12 and to be disposed at a point horizontally across therefrom on the opposite rearward leg 10.

The forward grommets 46 are prevented from sliding downwardly on the forward legs 14 and 16 by the foldable linkages or rungs 22 at the upper end thereof. The rearward grommets 46,46 and 46 are supported by collars 48 disposed on rearward legs 10 and 12 and fixed thereto by set screws.

The center grommets 46 are held in place by hooks 48 ' which are attached to the rear legs 10 and 12 respectively, the two hooks $48^{\prime}$ hooking respectively into the center grommets 46 as best seen in Figure 1. The hooks $48^{\prime}$ can be attached to the legs 10 and 12 in any suitable fashion.

When it is desired to collapse the chair, the seat portion 42 can be removed by unhooking the side grommets 46 from the hooks 48 ', and by lifting the forward and rearward grommets 46 upwardly from the forward and rearward legs respectively.

The cross bracing linkages $\mathbf{3 0}$ are then unhooked and allowed to pivot into positions in parallelism with the legs to which they are attached. Then the forward legs are moved upwardly and rearwardly toward the rearward legs by causing the foldable linkage members 30 or rungs 23 to bend upwardly. The parts are then in the position shown in Figure 3.

Referring now to Figures 2 and 6 it will be seen that a plurality of snap fasteners 50 are provided on the horizontally extending upper and lower edges of the covering portion of the chair whereby when the chair is disposed in the position in Figure 3 the covering can be wrapped around the other parts of the chair and snaps 50 can be used to fasten the covering in place so as to hold all other parts in the collapsed position.
The grommet 46 at the upper end of the covering which is disposed receiving the chair leg 10 can be left on the chair leg 10 as best seen in Figure 3 and never removed therefrom and thercby it forms an anchor point for the covering whereby when the chair is in the collapsed position it serves to prevent downward movement of the
covering independently of the remainder of the chair.
From the foregoing description, it is thought to be obvious that a collapsable chair constructed in accordance with my invention is particularly well adapted for use, by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some changes and modification without departing from the principles and spirit thereof, and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying our my invention in practice, except as claimed.

I claim:
A collapsable chair adapted to be collapsed into a felded shape of an especially elongated nature with respect to its largest folded circumference comprising two vertically extending forward legs of substantially the same height and two vertically extending rearward legs of height substantially greater than said forward legs and with one rearward leg being substantially higher than the other rearward leg, said rearward legs providing upper ends forming supports for a back of the chair, foldable linkage means interconnecting said legs for attaching said legs together into a single unit and so arranged that each linkage means pivots at a point between its ends about a normally horizontal axis, spaced a substantial distance from the center point of said linkage whereby said legs each fold into positions staggered in height with respect to each other with the lower end of said one rearward leg being lowermost whereby the said one rearward leg forms a cane carrying other parts of the chair, other linkage means removably interconnecting said legs for holding said legs in upright positions when in use as a chair and for permittting disconnection thereof each from at least one respective leg to permit collapsing, and a foldable covering portion attached to upper end portions of said forward legs and to upper end portions of said rearward legs for forming a seat and a back rest.

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