May 18, 1937. W. F. CRAWFORD 2,080,761

CHAIR

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Fig. 1.

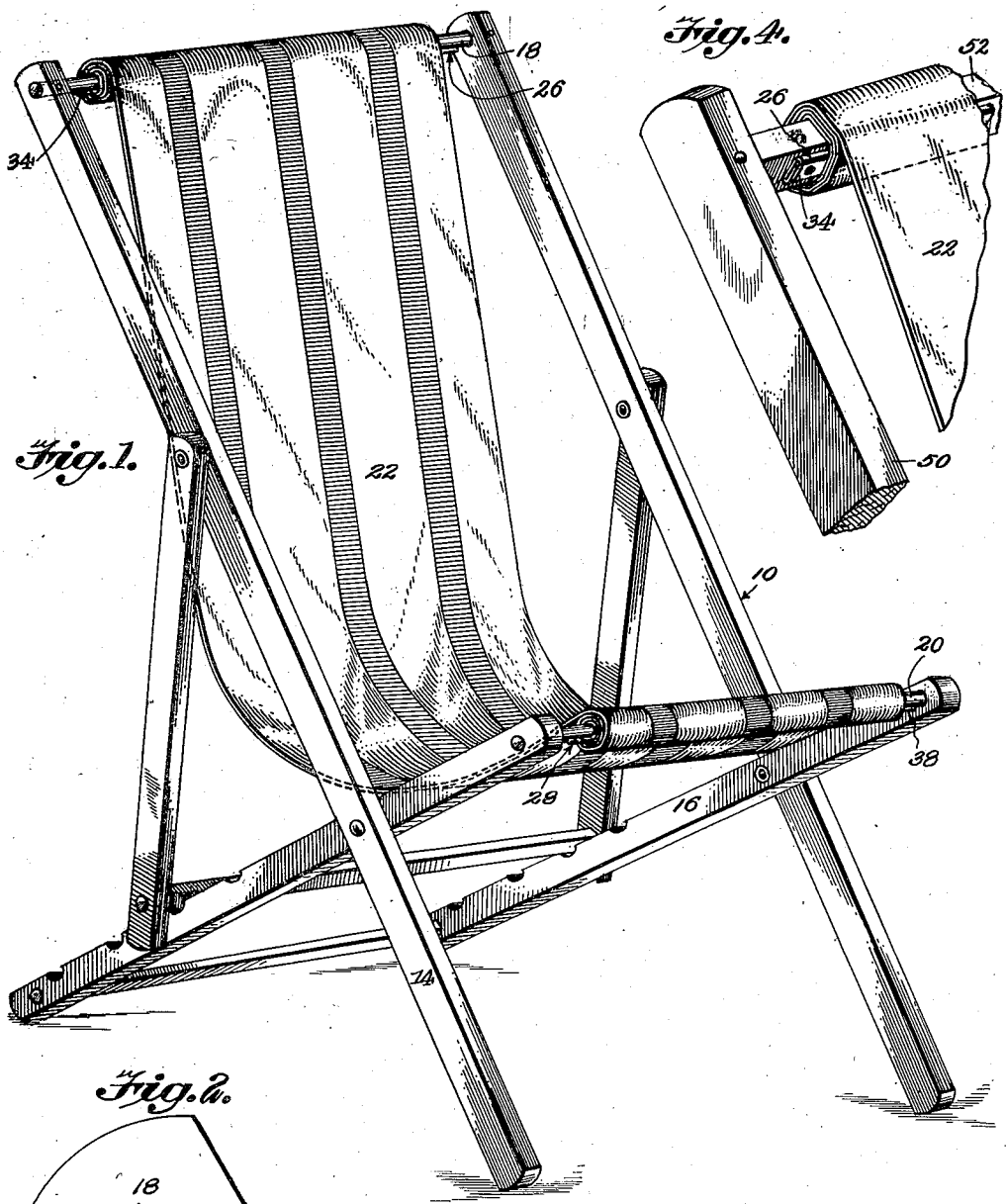


Fig. 4.

Fig. 2.

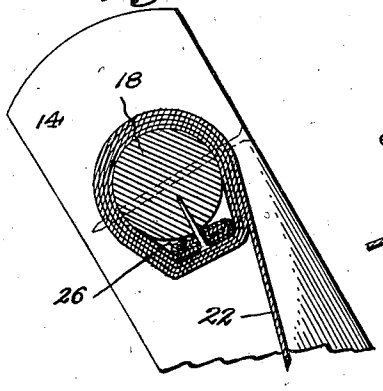
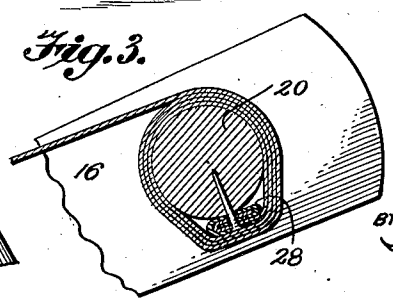


Fig. 3.



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CHAIR

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Fig. 5.

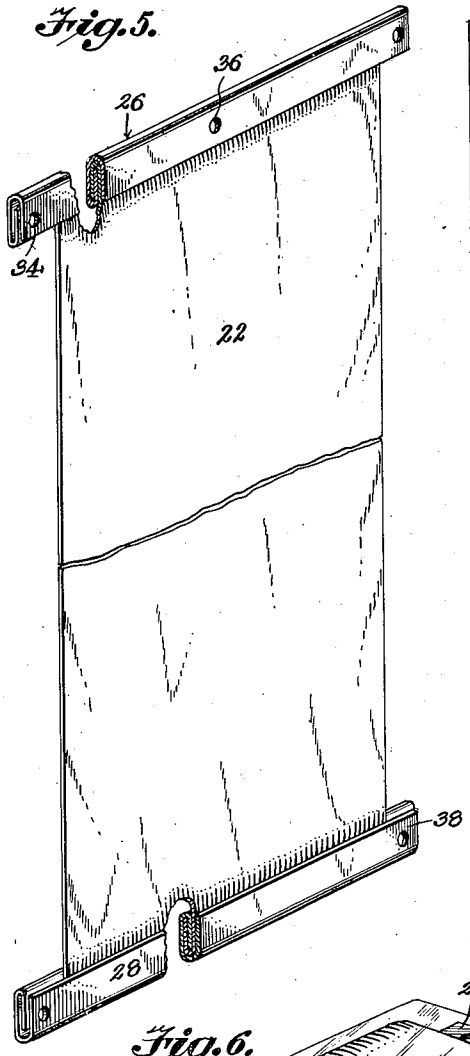


Fig. 7.

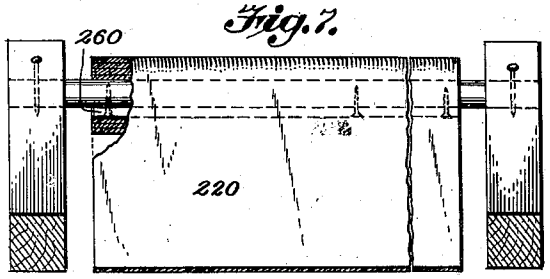


Fig. 8.

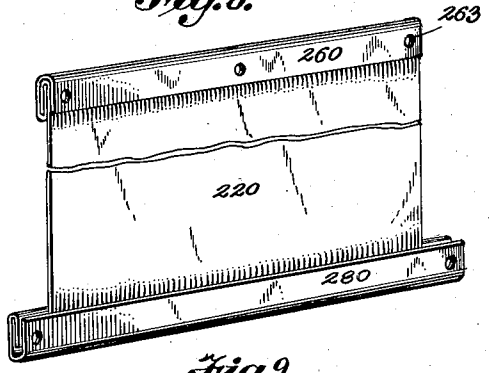


Fig. 9.

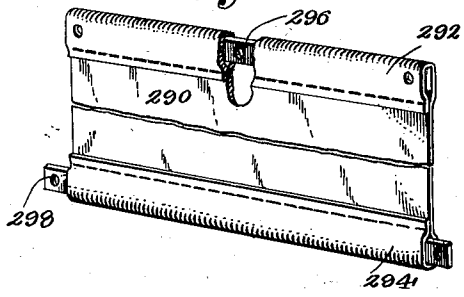


Fig. 6.

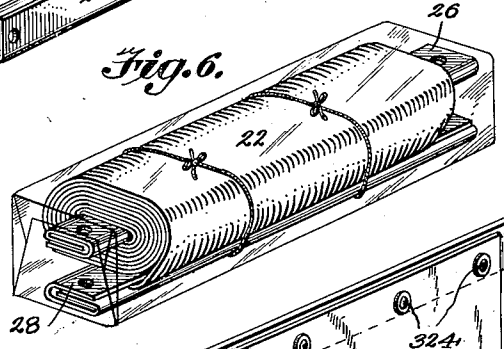


Fig. 10.

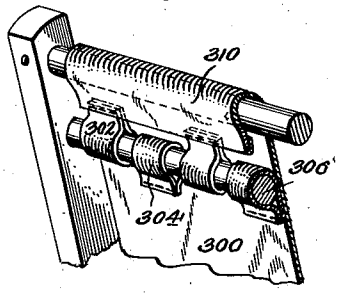
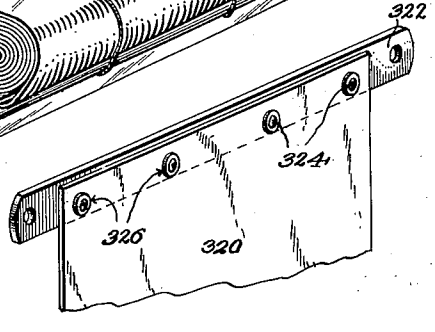


Fig. 11.



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UNITED STATES PATENT OFFICE

2,080,761

CHAIR

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Application March 8, 1935, Serial No. 10,076

4 Claims. (Cl. 155—119)

This invention relates to chairs of the type in which the seat is in the nature of a flexible webbing suspended between fixed rungs.

It has been found that most of the frames of present-day reclining chairs outlast the flexible seat forming webbings thereof, this being true because of the inability of the webbings to withstand rain, intense sun, and other detrimental factors such, for example, as the physical strain under which the webbings are placed. The relatively short life of the original webbing points to the need of a replacement webbing, but in many chairs, the original webbing is tacked directly to the hard wood rungs of the chair requiring a special nail puller for the extraction of the original fastening tacks and, of course, such devices are not ordinarily available in the home.

In other chairs, the ends of the seat forming webbings are made with loops to receive the rungs that are nailed to the chair with the result that if a similar webbing is to be applied, it is necessary to remove these fixed rungs for connection with the looped ends of the replacement webbing.

Clearly, the average person lacks the mechanical ability and the equipment required to attach new chair seats as outlined above. In addition, the distance between the sides of the ordinary reclining chair is usually in the neighborhood of 15 inches, while the material suitable for use as a replacement seat is sold in widths of either 30 or 31 inches, making it necessary to purchase twice as much material as is needed for the replacement seat or to purchase a piece of material half the length required and then split the material along the center line thereof and join the ends of the two pieces thus formed. After this is done, the new material is either attached to the chair rungs with loops or is tacked thereto at spaced points. The tacking in place of the new webbing is not entirely satisfactory, because of the absence of a uniform connection between it and the rungs throughout the width of the webbing.

With an appreciation of the foregoing and other difficulties involved in renewing reclining chair seats the invention forming the subject of this application will be found to contemplate a simple and economical means by which a reclining chair may be furnished with a new seat without the exercise of unusual skill and without a greater expense than is justified for this purpose.

Another major attribute of the invention resides in the means by which the replacement webbing is permanently and rigidly attached to a chair in a manner which precludes the possibility of accidental disconnection or loosening of the webbing and in this way the successive occupants of the chair are protected against painful injury due to failure of the webbing attaching means, all while leaving the webbing attaching means an extremely simple matter.

More specifically, a replacement webbing embodying the invention has the end portions thereof provided with relatively rigid attaching strips which function not only as such but as a means of uniformly engaging webbing throughout the width thereof and thus better enable the webbing to resist pulling strain incident to use.

In addition, one or both of the relatively rigid attaching strips will be found to project beyond the edges of the webbing to form attaching ears for permanent and rigid connection with the rungs of the chair while the strips are further secured to the rungs by successive wrappings or convolutions of the webbing about these parts.

The invention further looks to a replacement reclining chair seat which may be placed upon the market ready for use, possibly in a Cellophane package, so that prospective purchasers may see the color and pattern of the material.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application and in which like numerals are employed to designate like parts throughout the same.

Figure 1 is a perspective of a chair embodying the invention,

Figure 2 is a detail sectional view illustrating the manner in which the replacement webbing is attached to the upper rung of the chair,

Figure 3 is a similar view illustrating the manner in which the replacement webbing is attached to the lower rung of the chair,

Figure 4 is a fragmentary perspective illustrating the application of the replacement webbing to a chair having square rungs,

Figure 5 is a fragmentary perspective of the replacement webbing detached,

Figure 6 is a perspective of the webbing in the form of a package for handling in trade,

Figure 7 is a fragmentary sectional view disclosing a modified form of invention,

Figure 8 is a fragmentary perspective of the replacement webbing shown in Figure 7,

Figure 9 is a fragmentary perspective disclosing another expression of the invention,

Figure 10 is a similar view of a further modification of the invention,

Figure 11 is a fragmentary perspective of a still further expression of the invention.

In the drawings, the numeral 10 designates a reclining chair of a type which may be easily and compactly folded and which is to be found on lawns, porches, beaches and other places where there is use for a light, easily handled and comfortable chair.

The chair is shown in Figure 1 to embody a frame having legs 14 and 16, the legs 14 projecting to points substantially above what might be said to be the seat of the chair and joined by a transverse rung or rail 18. The legs 16 have connections at the upper portions thereof with a transverse rail or rung 20. It is to the rungs or rails 18 and 20 that the seat and back forming webbing is ordinarily attached.

As brought out in the opening paragraphs of this specification, the frame 10 usually outlasts the webbing of the chair because of the inability of the webbing to withstand the use and abuse to which chairs of this type are subjected and to resist the deleterious effects of exposure to the weather.

This points to the expediency of a replacement webbing, one that may be easily applied without resorting to unusual mechanical skill and without a greater expense than is expedient under the circumstances. To that end, the invention will be found to embody a fabric webbing 22 having what might be said to be the upper and lower end portions thereof provided with attaching strips 26 and 28, respectively. The attaching strips are of a suitably stout metal substantially U-shaped in cross section and having spaced parallel sides with one of the sides of each strip continued into the space between the sides so as to provide substantially U-shaped channels in which the end portions of the webbing are firmly and uniformly clamped. That is to say, the end portions of the fabric or webbing are positioned in the U-shaped channels in the several strips and are firmly clamped in place with the aid of pressure so that the webbing is secured uniformly throughout its width to the associated attaching strips. By reason of this arrangement, the fabric is prevented from pulling away from the strips at one or more points and tearing, as would be the case were the webbing attached only at spaced points.

Preparatory to the application of the replacement webbing to the chair, the old or original webbing is removed, and it is immaterial that one or more tacks remain in the rungs of a chair. However, it is preferable that these tacks be driven into the rungs so as to prevent the same from either tearing the new webbing or snagging the clothing of those who use the chair.

The first step in actually applying the webbing to the chair is to tack the upper strip 26 to the upper rung 18. For this purpose, the strip 26 will be found to project beyond the longitudinal edges of the webbing and to be apertured to form apertured ears 34. The intermediate portion of the attaching strip 26 is formed with one or more openings 36 for the reception of additional tacks so that the fastening strip 26 is securely and permanently attached to the rung 18. After this, the webbing is wrapped an appropriate number of times about the upper rung and the associated fastening strip 26 and is then drawn tightly so as to define a snubbing medium between the rung 18 and the seat forming portion of the webbing.

The lower portion of the webbing is then wrapped about the lower rung 20, so as to locate the fastening strip 28 against the rung and surrounded by an appropriate number of convolutions of the webbing. With the lower fastening strip thus in place, fastening tacks are driven through the projecting apertured end portions 38 of this strip and into the lower rung so as to permanently and rigidly attach the lower portion of the webbing to the rung 20, safe and secure against accidental detachment. That is to say, the lower portion of the webbing is permanently and safely attached to the lower rung first, by the permanent tacking of the attaching strip 28 to the rung and second, by those convolutions of the webbing which encircle the lower rung and the fastening strip.

Of course, the same applies to the connection of the upper portion of the webbing with the upper rung 18 and in this way I am enabled to inhibit accidental disconnection of the webbing from the frame. In passing, it might be noted that chairs of this kind are moved about with more or less carelessness and were it not for the fact that the attaching strips 26 and 28 are permanently secured to the associated rungs, the webbing might be easily disconnected from one of the rungs and cause painful injury to the occupant of the chair. This is especially true when considered in connection with the fact that fluttering of the webbing in a stiff breeze or movement of the webbing from any other cause, might result in loosening the fabric convolutions which aid in securing the webbing in place.

In my invention, the convoltions of the webbing act in concert with the permanent and rigid connection of the strips 26 and 28 to the rungs in providing a safe and permanent attachment of the replacement webbing to the chair. If for any reason, the convolutions of the webbing should become loose, the attaching strips 26 and 28 will remain safely in place protecting the occupant of the chair against unexpected collapse of the webbing and possibly personal injury.

It is important to observe that, as illustrated, in many chairs of the general kind herein shown, the rungs 18 and 20 are round and thus without broad flat surfaces against which the fastening strips might bear, but this is no barrier to the permanent and secure mounting of the strips 26 and 28. At the same time, the replacement webbing may be applied with facility and with assurance of permanence to a chair having polygonal rungs. For example, in Figure 4 there is a showing of a chair 50 having polygonal rungs 52 to which the webbing is secured through the intervention of the fastening strips 26 and 28 and the wrapping of the terminal portions of the webbing about the strips and the rungs. In this case, the attaching strips are, of course, secured against flat surfaces of the rungs 52, while in Figures 1, 2 and 3, the attaching strips are secured to the rounded surfaces of the rungs, but at the same time are held rigidly in place, secure against accidental disconnection under strain.

It will be seen that the wrapping of portions of the webbing about the upper and lower rungs and the associated attaching strips not only provides definite snubbing action, but also looks to the convenient regulation of the length of that part of the webbing employed for actual seating purposes. In this way, the webbing may be made

full and loose or otherwise depending entirely upon the number of times the webbing is wrapped about the rungs and fastening strips.

It is illustrated in Figure 1 that the terminal portions of the rungs 18 and 20 are extended through the members 14 and 16 and are rigidly secured in place with nails so that it is not feasible to take apart the chair for the purpose of applying the new webbing, especially in view of the fact that most chairs of the type herein shown are made of hard wood, adding to the difficulty that would be involved in removing the rung fastening nails.

The replacement seat herein shown provides a simple and inexpensive means by which chairs may be furnished with a new webbing at a low cost and without much of the effort required for the installation of a new permanent equally safe seat by other known methods.

As shown in Figure 6, the replacement webbing or seat may be arranged in a compact bundle or package and enclosed in Cellophane so that the purchaser may see at a glance the pattern and color of the material offered for sale.

From Figures 7 and 8, it will be seen that, if desired, one of the attaching strips 260 for example, may terminate approximately flush with the longitudinal edges of the webbing 220. Of course, the strip 260 is the first strip to be connected to one of the rungs of the chair and is provided with a suitable number of spaced openings 263 for the passage of appropriate fastening devices by which the strip is permanently and safely secured in place. The attaching strip 260 may be allowed to terminate approximately flush with the edges of the webbing because it is after the strip 260 is secured to one of the rungs that the webbing is wrapped around the rung and the strip to provide the desired snubbing action.

On the other hand, the attaching strip 280 at the other end of the webbing is extended beyond the longitudinal edges of the webbing and is apertured for the reception of fastening devices by which this particular attaching strip is secured safely in place. It is believed to be clear that the attaching strip 280 is the second one to be applied and that the same is turned about the associated rung a sufficient number of times to provide a second and immediately adjacent snubbing medium. It is after the webbing has been coiled about the strip 280 and the associated rung that the projecting ends of the strip 280 are nailed or otherwise safely and permanently anchored to the adjacent rung of the chair.

In the form of invention disclosed in Figure 9, the webbing is designated by the numeral 290 and has the ends thereof formed with transverse loops 292 and 294 receiving combined attaching and stiffening strips 296 and 298, respectively.

One of the stiffening strips, for example the strip 296, may terminate approximately flush with the longitudinal edges of the webbing, in which case the strip 296 is safely and permanently anchored to one of the rungs of the chair before the adjacent portion of the webbing is coiled about the adjacent rung.

In carrying out the form of invention shown in Figure 9, the strip 296 and possibly the surrounding loop 292 may be formed with initially present openings to facilitate the application of fastening devices, such as nails, by which one end of the webbing is permanently and rigidly secured to one of the rungs.

The strip 298 is shown to be extended beyond the longitudinal edges of the loop 294 to provide attaching ears apertured for the reception of fastening devices by which the adjacent end of the webbing is anchored to the chair. Of course, prior to the permanent attachment of the strip 298 to one rung of the chair, the webbing is formed with an appropriate number of convolutions encircling the parts 294, 298 and the adjacent rung of the chair to give the required snubbing action. As previously stated, it is the concerted action of the snubbing medium and the permanent connection of the ends of the webbing to the rungs that protects the occupant of the chair against the collapse of the webbing and possible painful injury.

In the form of invention illustrated in Figure 10, the webbing 300 is formed at one end thereof with spaced loops 302 adapted to be brought into registration with mating and staggered loops 304 on what might be said to be the back of the webbing. With the loops 302 and 304 thus aligned a connecting strip 306 of any suitable cross-section and material is passed through the loops to form a main loop or attaching portion 310 receiving the associated rung of the chair.

In the form of invention illustrated in Figure 11, the webbing 320 is secured at one end thereof to an attaching strip 322 through the medium of any appropriate fastening means, such as rivets 324 with washers 326 interposed between the heads of the rivets and the webbing to prevent the rivets from tearing or pulling through the webbing. The strip 322 is shown to have the terminal portions thereof extended beyond the longitudinal edges of the webbing and apertured for the reception of fastening devices by which this particular strip is safely and permanently secured to the associated rung of the chair. Prior to the permanent attachment of the strip 322 to the associated rung of the chair, the webbing is formed with an appropriate number of convolutions encircling the parts 322, 324 and 326 and the adjacent rung of the chair to give the required snubbing action.

What is claimed is:

1. In a chair, a framework having spaced side members interconnected by spaced fixed round rungs, a flexible seat and back-forming webbing having end and edge portions, attaching means carried by the end portions of the webbing, one of said attaching means being fixedly secured to the framework, the other of said attaching means being of a length somewhat less than the distance between said side members and having portions projecting beyond the edges of the webbing to provide means for rotating the attaching means around the associated rung to wrap the webbing about the attaching means and said associated rung before securing the attaching means to the framework, and means engaged with said projecting portions to fixedly secure the said other attaching means to the framework.

2. In a chair, a framework having spaced side members interconnected by spaced fixed round rungs, a flexible webbing having end and edge portions, attaching strips carried by the end portions of the webbing, means for fixedly securing one of said attaching strips to the framework with the adjacent end portion of the webbing wrapped about the secured strip and associated rung, the other of said attaching strips being of a length somewhat less than the distance between

said side members and having portions projecting beyond the edges of the webbing, said projecting portions serving as means which may be engaged to rotate the strip around the other rung for wrapping the webbing about said rung and strip before securing the strip to the framework, and means engaged with said projecting portions for fixedly securing the said other strip to the framework.

3. In a chair, a framework having spaced side members interconnected by spaced fixed round rungs, a flexible seat and back forming webbing having end and edge portions, attaching strips carried by the end portions of the webbing and adapted to be fixedly secured to said rungs with the adjacent end portions of the webbing wrapped about the attaching strips and the associated rungs, one of said strips being of a length somewhat less than the distance between said side members and having terminal portions projecting beyond the edge portions of the webbing to form ears which may be engaged for moving the strip around the associated rung between the side members of the chair framework to wrap the webbing about the strip and the associated rung, said ears being apertured, fastening elements passing through said apertured ears and into the associated rung to fixedly secure the ears to the rung.

4. In a chair, a framework having spaced side members interconnected by spaced fixed round rungs, a flexible seat and back forming webbing having end and edge portions, attaching strips carried by the end portions of the webbing and adapted to be fixedly secured to the framework with the adjacent end portions of the webbing wrapped about the rungs and the attaching strips, each of said attaching strips being of a length less than the distance between said members and having terminal portions projecting beyond the edge portions of the webbing to form ears which may be engaged for rotating the strips around the associated rungs between the side members of the chair framework to effect the wrapping of the webbing about the strips and the associated rungs, and means engaged with said projecting ears for fixedly securing said attaching strips to the framework.

WILBUR F. CRAWFORD.