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W. L. GITTINGS ET AL

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DETACHABLE FLEXIBLE SEAT FOR FOLDING CHAIRS

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Fig. 1.

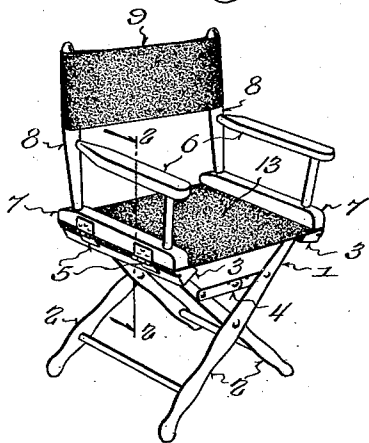


Fig. 2.

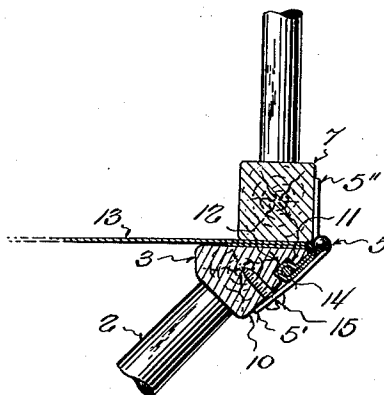


Fig. 3.

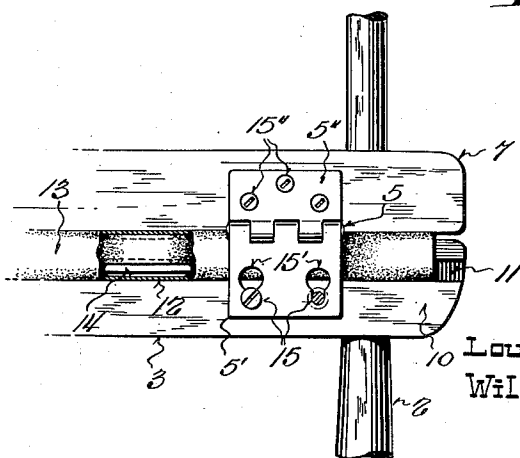
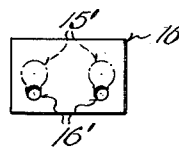


Fig. 4.



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DETACHABLE FLEXIBLE SEAT FOR
FOLDING CHAIRS

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1 Claim. (Cl. 155—140)

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This invention pertains generally to folding chairs, and more particularly to an improved attachment of fabric seats in chairs or stools of the folding type.

Heretofore, in chairs of the foregoing character, it has been common practise to tack or staple the ends of the fabric seats to the under sides of the chair or stool rails. Consequently, a tedious operation is required in renewing the fabric seat when worn, or replacing the same in instances where a different color or design of fabric is desired.

Therefore, the primary object of the present invention resides in the provision of quick detachable means for fastening a fabric seat to the rails of a folding chair or stool, without the use of tacks or staples and mutilation of the fabric.

Incidental to the foregoing, a more specific object of the invention is to provide the chair rails with longitudinal grooves for reception of welts formed on the ends of the seat fabric and held in the grooves by retaining plates removably fastened to the rails.

Another object of the invention is to form the welts on the fabric by looping the ends of the same around suitable metallic or non-metallic cores.

Another object is to provide the retaining plates with key-hole slots for reception of attaching screws, whereby the plates may be quickly removed by merely loosening the end screws.

A still further object in connection with folding chairs equipped with hinged arm rests, is to form the welt receiving grooves on the outer faces of the chair rails and lock the welts within the grooves by means of the arm rest hinges.

In addition to the foregoing, other objects will appear as the description proceeds, and while the accompanying drawing illustrates one complete physical form of the invention constructed in accordance with the best mode so far devised, it is to be understood that changes in the precise embodiment of the invention are contemplated within the scope of the appended claim.

In the drawing:

Fig. 1 is a perspective view of one type of conventional folding chair to which the present invention is applied;

Fig. 2 is an enlarged fragmentary sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary side elevational view of that portion shown in Fig. 2, with parts broken away and in section to more clearly illustrate structural details; and

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Fig. 4 is an elevational view of a modified form of retainer plate for use in connection with folding chairs or stools which are not equipped with hinged arm rests, such as shown in Fig. 1.

Referring now more particularly to the accompanying drawing, the chair illustrated in Fig. 1 consists of a base 1 including front and rear sets of pivotally connected cross legs 2, dowelled or otherwise secured at their upper ends in the bottom faces of a pair of side rails 3. The usual jointed bracket 4, connected to the front set of cross legs 2, serves to latch the legs in expanded operative position.

Pivotally connected to the side rails 3 by means of hinges 5 is a pair of arm rests 6, which include runners 7 supported on the side rails in operative position, and a pair of back posts 8 that receive the looped ends of a fabric back rest 9, which also serves to hold the arm rest 6 in operative position.

As best shown in Figs. 2 and 3 the outer faces 10 of the side rails 3 are provided with longitudinal grooves 11 for reception of welts 12 formed on the ends of a fabric seat 13.

For the purpose of the present invention the welts 12 may be formed in various ways, but for the sake of simplicity it is proposed to fold the ends of the fabric seat back upon itself and insert either metallic or non-metallic cores 14 in the loop thus formed. The lower plates 5' of the hinges 5 are secured to the outer faces 10 of the seat rails 3 by screws 15, while the upper plates 5'' are fastened to the outer faces of the arm rest runners 7, by conventional screws or spiral nails 15''.

In the event it is desired to provide for removal of the arm rest hinges 5 from the side rails 3 without removing the attaching screws 15, the hinge plates 5' are provided with key-hole slots 15' for reception of the screws 15. In such an arrangement it will be apparent that by merely loosening the screws 15, and swinging the arm rests 6 outwardly, the hinges may be dropped down and removed from the side rail without completely detaching the screws, to expose the end welts 12 for removal from the grooves 11 in the side rail 3.

When the present form of attachment of fabric seats is applied to the side rails of stools not provided with hinged arm rests, the welts 12 of the seat 13 are locked within the grooves 11 by retainer plates 16, such as illustrated in Fig. 4, and which are of sufficient depth to extend over the welts when secured to the outer faces of the side rails, in the same manner as the hinges

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5. As shown, the screw openings 16' in the retainer plate 4 may be round for receiving the shanks of the screws, or if desired the key-hole slots 15' indicated in dot and dash lines may be used.

In practise of the present invention in accordance with the structure illustrated, the ends of the fabric seat are looped back upon themselves and preferably stitched, although this is not essential, inasmuch as crimping of the loops over the edges of the side rails 3, and locking of the welts 12 in the grooves 11, is sufficient in most instances to prevent the looped ends from pulling out even though not stitched.

The cores 14 are then inserted in the loops to create the welts 12, and as previously indicated the cores can be formed of wire, wood, cord, reed or composition, preferably round in cross-section to eliminate cutting edges.

For attachment, the welts 12 are inserted into the grooves 11, after which either the hinges 5 or the retainer plates 16 are attached in the manner described.

From the foregoing explanation, considered in connection with the accompanying drawing, it will be apparent that simple, inexpensive and effective means have been devised for attaching fabric seats to chair rails without the tedious operation of tacking or stapling, and which highly facilitates renewal or replacement of the seats when required.

Particular advantage of the invention is derived in chairs equipped with hinged arm rests, in that no additional fastening devices are required, and the clamping action of the arm rest runners in cooperation with the side rails, reduces strain on the folds of the fabric over the edges of the rails to a minimum.

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Also due to the end folds of the fabric over the edges of the side rails, little or no strain is imposed upon the hinge plate 5. Lastly, the present invention affords an extremely neat finished appearance, and requires no piercing or mutilation of the seat fabric.

We claim:

In a folding chair including pivotally connected legs and a pair of side rails rigidly connected to said legs, a fabric seat carried by said side rails, a pair of arm rests including back posts, a fabric back rest carried by said back posts, and hinges connecting said arm rest to said side rails; longitudinal recesses formed in the outer faces of said side rails, and welts formed on the ends of said fabric seat for insertion in said recesses, said hinges overlying said welts to hold the same in said recesses, said arm rests being normally supported on said rails above said fabric seat and cooperating with said rails to clamp the ends of said seat.

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