Jan. 15, 1935. H. E. LEVINE 1,987,940

FURNITURE

Filed June 20, 1934

Fig. 5.

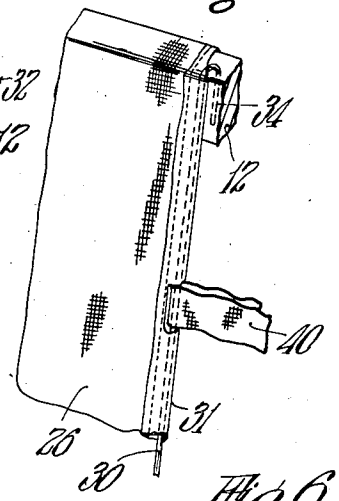


Fig. 2

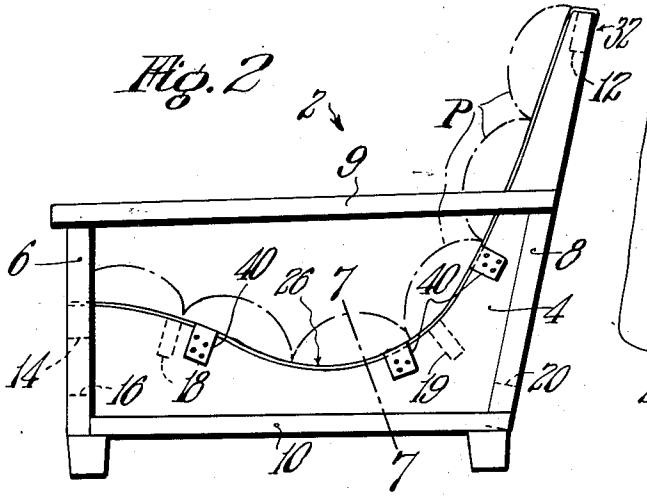


Fig. 6.

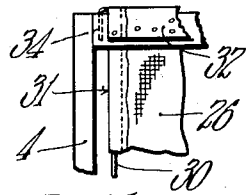


Fig. 3.

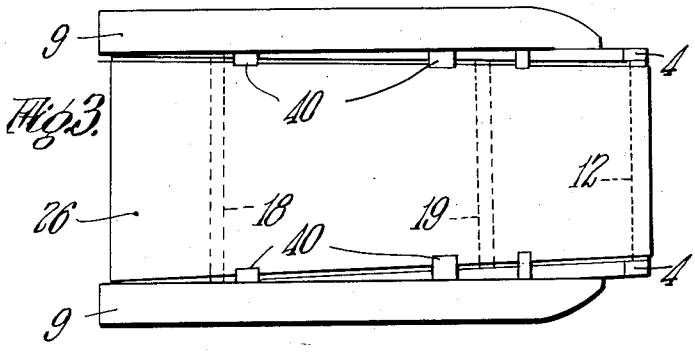


Fig. 7.

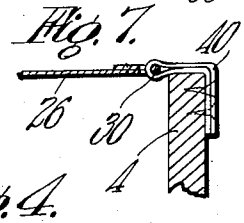


Fig. 4.

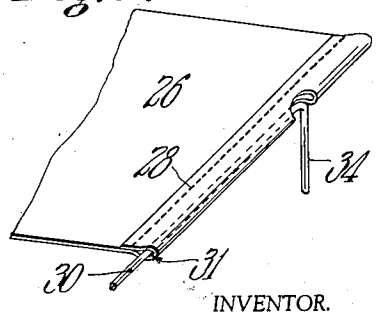
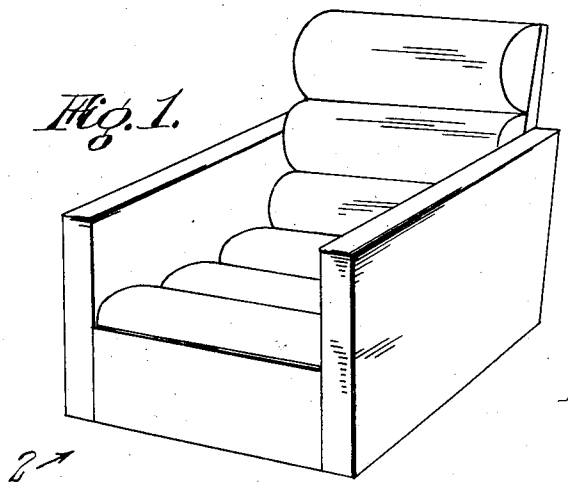


Fig. 1.



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UNITED STATES PATENT OFFICE

1,987,940

FURNITURE

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Application June 20, 1934, Serial No. 731,512

3 Claims. (Cl. 155—187)

This invention relates to improvements in furniture and is directed more particularly to improvements in upholstered furniture.

One object of the invention is the provision of improvements in the construction of chairs, sofas, davenports, and the like, of the upholstered or stuffed type and as a special feature of the invention means is provided to facilitate the comfort and ease desired in upholstered furniture without the spring means commonly employed in connection therewith.

Another object of the invention is the provision of a furniture structure which is relatively simple in form and inexpensive to produce as distinguished from prior art furniture and by reason of the novel features of the invention it is adapted for wide application in the construction of various forms of furniture such as chairs, sofas, davenports, and the like.

A further object of the invention is the provision of a furniture structure where end plates are so shaped and co-operate with a novel flexible support in such a way as to provide a seat and back which may be upholstered to provide the ease and comfort without the aid of springs, the flexible member being held in a novel way in its seat and back-forming relation with reinforcements associated therewith to maintain it in the general shape desired.

For purposes of description the invention will be described in connection with a chair but it will be readily understood that it is adapted for wide application and may well be employed not only with chairs of all types but as well with davenports, sofas, and other articles of furniture.

The various novel features and advantages of the invention will be more fully hereinafter referred to in connection with the accompanying detail description thereof, reference being had to the accompanying drawing wherein:

Fig. 1 is a perspective view of an article of furniture embodying the novel features of the invention;

Fig. 2 is a side elevational view of a chair to show the construction of the frame-work or foundation thereof;

Fig. 3 is a plan view of the chair shown in Fig. 2;

Fig. 4 is a fragmentary elevational view to explain certain details of construction;

Fig. 5 is a perspective fragmentary view to explain how the supporting member is reinforced and associated with the frame of the chair;

Fig. 6 is a fragmentary rear elevational view at one corner of the chair; and

Fig. 7 is a sectional elevational view on the line 7—7 of Fig. 2.

Referring now to the drawing more in detail, the invention will be fully described.

A chair 2 is shown in Figs. 1, 2 and 3 which has a frame consisting of side plates 4, forward posts 6, rear posts 8 and longitudinal rails 10. An upper rear rail 12 extends between the side members 4 at the rear sides and a forward rail 14 extends between the members 4 at their forward sides.

These rails mentioned extend transversely between the members 4 and there may be other rails such as 16, 18, 19, and 20 suitably secured to the side members, bottom rails, posts and other parts to provide a strong rigid frame work construction. As an essential feature, the structure includes plates or side members such as 4 whether the invention is embodied in a chair such as shown, or chairs of other forms with or without arms such as 9, or with a sofa, davenport or the like.

The side plates 4 have upper edge portions, as shown in Fig. 2, which curve rearwardly and downwardly to an approximate central portion and then rearwardly and upwardly past arm rests 9 to rail 12 as shown in Fig. 3 in the contour of a seat and back. It is desired for comfort and other reasons that the article of furniture such as an upholstered and covered chair be of such shape as to fit the person sitting in it and as will appear the upper edge portions of the side members or equivalent parts are arranged to approximate the desired ultimate shape of seat and back.

In furniture of this type it is usual to provide filling, padding or the like which is covered with decorative material and which is supported or backed up by springs, but according to this invention, springs are not necessary and are entirely eliminated, and in lieu thereof, there is provided a support member such as 26.

This supporting member 26 is preferably of some flexible material such as fabric preferably of an inexpensive nature, such as, for instance, burlap or the like. The supporting member extends between the rails 14 and 12 to which its opposite ends are secured and between its points of attachment to the rails it is secured to the frame in such a way as to approximate the contour of the upper side edge of the plates 4 and form the foundation for the seat and back. While it is somewhat yieldable it is at the same time held against distorting to an objectionable extent so as to serve as a foundation for the seat and back.

Opposite longitudinal edges of the support 26 are turned over and secured as by stitching 28 to

form a tube or case 31 along each marginal edge. In the tubes 31 there are inserted relatively rigid reinforcing members such as a length of wire or the like indicated by 30. The reinforcing members are formed to approximate the contour it is desired to impart to the member 26 to provide the seat and back, as desired.

The upper end such as 32 of the member 26 preferably extends over the rail 12 and down the rear side thereof and is secured in any well-known manner, as by tacking or the like.

The rod members 30 have their opposite ends formed to provide prongs such as 34 and these prongs are driven downwardly into the rail 12 so as to anchor the rods. The other end of the support 26 and the ends of the rods 30 associated with the rail 14 are secured to said rail after the manner described in connection with the rail 12. In this way opposite ends of the support as well as opposite ends of rods are secured so that the support is capable of withstanding weight usually assumed by springs in furniture construction. The side edges of the support are held in seat and back forming position by means of straps 40 which are secured to the frame structure.

The straps 40 according to one form of the invention are employed as follows. The tubes at opposite sides of the support 26 are cut away so that the straps 40 may envelop the rods 30 and then the ends of the straps, as shown in Figs. 2 and 7, are secured to the members 4 as by tacking or the like.

With the opposite ends of the support 26 secured to the rails of the structure, with its sides reinforced by rods and with the sides of the support secured to the structure as described the support assumes and is maintained in the desired contour while it is yieldable to the required degree. It is held against undue distortion so that the chair when completed by padding, covering, and the like is properly and adequately supported without the use of springs such as heretofore employed.

The chair frame as shown in the drawing may be padded and covered in any well-known manner to complete it as shown in Fig. 1. In the form of the invention shown however there are provided for the seat and back a plurality of pads or bolsters P which may be connected together and which are disposed on the support 26 and secured in place. In this way the pads or other upholstering material has a suitable foundation and then of course the whole structure may be covered with the necessary and desired padding and other materials.

Where the structure described is employed in connection with a couch, davenport, or the like, and where the supporting member is relatively wider than that of a chair, other intermediate reinforcing members may be employed between the reinforcing members at opposite sides of the support and these may be secured to the rails and extend through other tubes provided in the reinforcing member.

It will be noted that a strong rugged support is provided which is properly reinforced to properly function as a foundation and support while it is yieldable to the desired extent and is held to maintain the proper shape of seat and back, all without the aid of springs or other parts.

While I have described my invention in great detail and with respect to a preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. The combination in an article of furniture of, spaced side members, forward and rear rail members connected thereto to provide a frame, the said rear rail member being disposed in a plane above that of the forward rail member, a flexible member for supporting upholstering extending between said side and rail members, resilient reinforcing rods secured to opposite side edges of said flexible member and extending between said rails formed to the contour of a seat extending rearwardly from the forward rail and a back extending upwardly therefrom to the rear rail to shape the said flexible member to seat and back-forming contour, means securing opposite ends of the said flexible member and reinforcing rods to said rails and means at spaced points intermediate the ends of the rods for securing the sides of said flexible member and the said reinforcing rods to said side members.

2. The combination in an article of furniture of, spaced side members, forward and rear rail members connected thereto, the latter of which is disposed in a plane above that of the former, a flexible support member to provide a foundation for the upholstery of a seat and back extending between said side and rail members, resilient reinforcing rods at opposite marginal side edges of said flexible member having their opposite ends secured to said rails, means securing the ends of the flexible member to the said rails, means securing the said rods and marginal edges of the flexible support together, the said rods being formed between opposite ends thereof to the contour of a seat extending inwardly from the forward rail and a back extending upwardly to the rear rail forming the flexible member to provide a foundation for a continuous seat and back extending rearwardly from the forward rail and upwardly to the rear rail and means at opposite sides of the flexible member and spaced intermediate the ends of said rods connecting said rods and side edges of the flexible support to said side members.

3. The combination in an article of furniture of, spaced side members, forward and rear rail members connected thereto, the latter of which is disposed in a plane above that of the former, a support member of flexible material to provide a foundation for the upholstery of a seat and back having opposite ends secured to said rails, tubes provided at the marginal side edges of said flexible member, resilient continuous reinforcing rods extending through said tubes having the opposite ends thereof bent to provide prongs which are driven into said rails for anchoring said rods to said rails, the said rods intermediate their ends being formed to the contour of a seat extending rearwardly from the forward rail and a back continuing therefrom and upwardly to the rear rail forming and holding said flexible member to the contour of a foundation for a back and seat, the side edges of said flexible support being cut away to provide openings at spaced points therealong, straps extending in said openings and engaging the rods having free ends secured to the side members whereby the rods and supporting member are held against appreciable movement relative to said side members.

HARRY E. LEVINE.