Nov. 14, 1950 M. FOX 2,529,683

YIELDABLE CONNECTOR FOR THE BACK REST OF CHAIRS

Filed Dec. 21, 1946

Fig. 1.

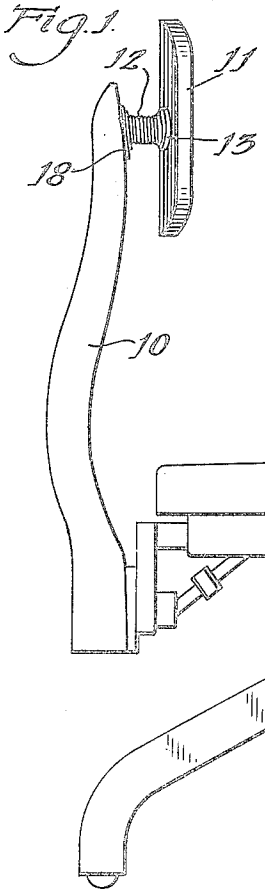


Fig. 4.

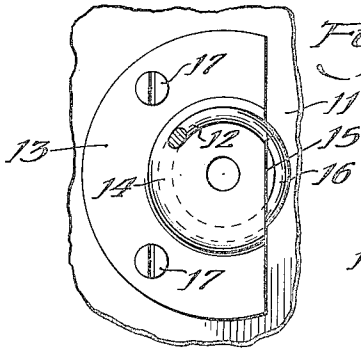


Fig. 2.

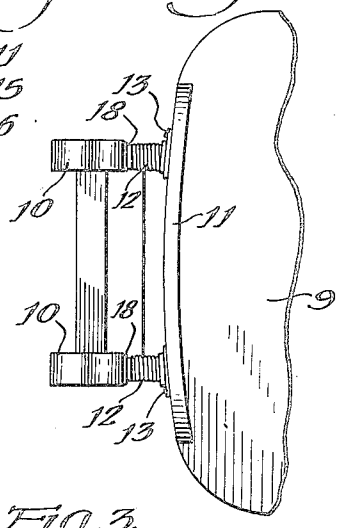


Fig. 3.

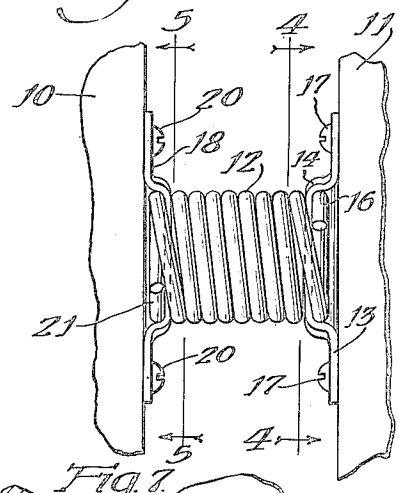


Fig. 5.

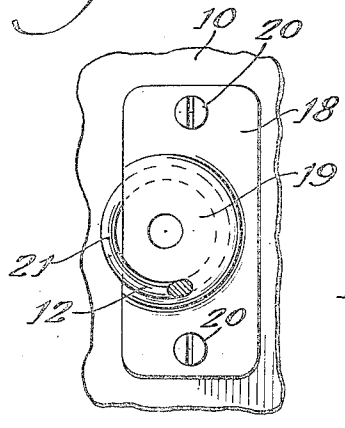


Fig. 6.

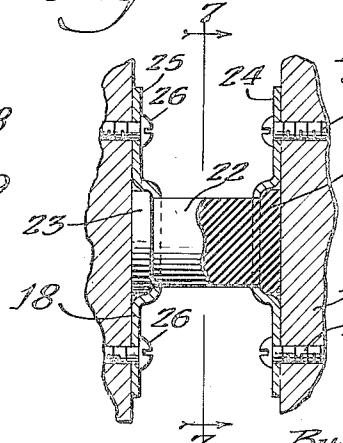
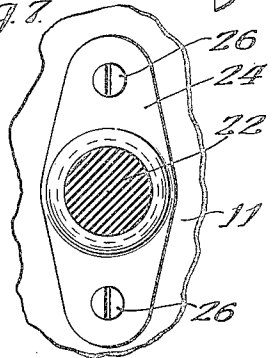


Fig. 7.



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YIELDABLE CONNECTOR FOR THE BACK REST OF CHAIRS

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3 Claims. (Cl. 155—158)

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This invention relates to chairs having back-rests which are movable with respect to the back frame of a chair, and more particularly to an improved connector for resiliently supporting the back-rest.

In ordinary office chairs it is common to have an arcuate back-rest movably or adjustably secured to the back frame of the chair, and for greater comfort it is preferred to have the back-rest hinged to the back frame, so that it will automatically adjust itself to the back of the occupant. If the hinges are stiff, automatic adjustment is impeded, and if the hinges are loose the back rest will tip forwardly each time pressure on it is released. The hinges must be designed so that their pivots are in alignment, and the hinges are often objectionable because they tend to catch and soil clothing of the user.

The primary object of the present invention is to provide a very simple and smooth connector which may be readily applied to the chair and will resiliently hold the back-rest in a desired position.

The invention is illustrated in preferred embodiments in the accompanying drawings in which—

Fig. 1 is a side elevational view of an office chair using the improved connector; Fig. 2 is a fragmentary plan view of the chair shown in Fig. 1; Fig. 3 is an enlarged fragmentary sectional view of the preferred type of connector and supporting bracket applied to a chair; Fig. 4 is a fragmentary sectional view, taken as indicated at line 4—4 of Fig. 3; Fig. 5 is a fragmentary sectional view, taken as indicated at line 5—5 of Fig. 3; Fig. 6, an enlarged fragmentary sectional view, showing a modified form of connector post; and Fig. 7, a fragmentary sectional view, taken as indicated at line 7—7 of Fig. 6.

In the embodiment shown in Figs. 1–5, an ordinary office chair is shown with a base 8, on which is swivelly mounted a seat 9, provided with a tilting back frame 10, to which is secured an arcuate back-rest 11 by a pair of yieldable connector members which are the subject matter of the present invention.

Each of the connector members has a short resilient post which is formed by a heavy, helically wound steel spring 12, which is stiffly resilient to lateral bending. A metal supporting bracket 13 has an outwardly struck hollow boss 14, which preferably is cut away at one side, as indicated at 15, so that one free end of the spring 12 may be secured thereto by screwing the spring into the boss, as indicated at 16. If the back-rest 11 is made of wood, the bracket 13 may be secured thereto by means of screws 17, or if the back rest is of metal it may be bolted or welded in position.

The other end of the spring 12 is held by a bracket 18 having a boss 19, and is shaped so that it may be secured to the back frame 10 by means of screws 20. The boss 19 is shown open

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at one side, so that the end of the spring may be secured to the bracket by screwing one end of the spring into the pocket formed by the boss, as indicated at 21.

As best shown in Fig. 2, it is not necessary that the base of the brackets 13 lie in the same plane, as the resilient post will accommodate itself to the curvature of the back-rest. When the chair is occupied, the back-rest will immediately accommodate itself to the conformation of the back of the occupant, and when the chair is unoccupied, the resilient posts 12 will bring it into the position shown in Fig. 1.

In the modification illustrated in Figs. 6 and 7, the resilient post 22 is formed of synthetic rubber, and is provided at each end with a flanged head 23. The supporting brackets 24 and 25 each have outwardly struck hollow bosses which are perforated to receive the post 22 and form flanged pockets adapted to fit tightly over the flanged heads of the post and grip them to the back-rest 11 and chair frame 10 when the bolts 26 are properly tightened.

The foregoing detailed description is given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, for some modifications will be obvious to those skilled in the art.

I claim:

1. A pair of yieldable connector members for securing a back-rest resiliently to the back frame of a chair, each of said connector members comprising: a short resilient post of stiffly elastic material, the lateral surface of said post being normally closed against admission of fabrics brought into contact therewith; and fastening brackets for each end of said post for securing it to a back-rest and back frame which are relatively movable.

2. A device as specified in claim 1, in which the resilient post is a helically wound, fully compressed spring, and the fastening brackets each have perforate hollow bosses of sheet metal into which the free ends of said spring may be screwed.

3. A device as specified in claim 1, in which the resilient post is made of rubber-like material and is provided at its ends with flanged heads, and the bracket members each have outwardly struck pockets to receive one of said flanged heads of the post and clamp it to a back member of a chair.

MARTIN FOX.

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