

Jan. 10, 1967

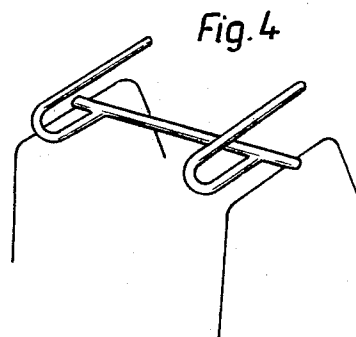
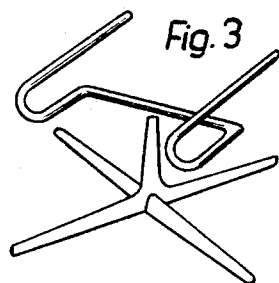
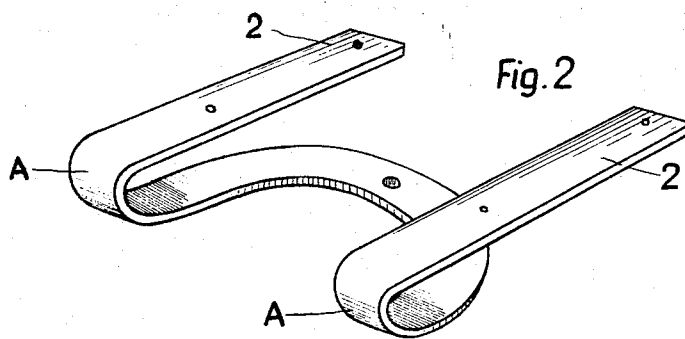
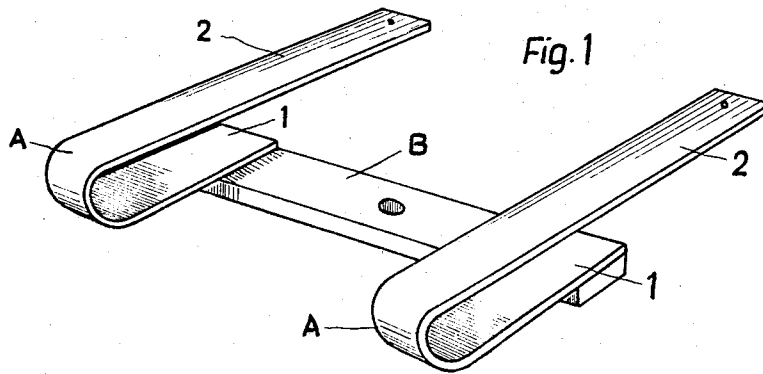
E. F. HOLMSTRÖM

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CHAIR

Filed April 23, 1965

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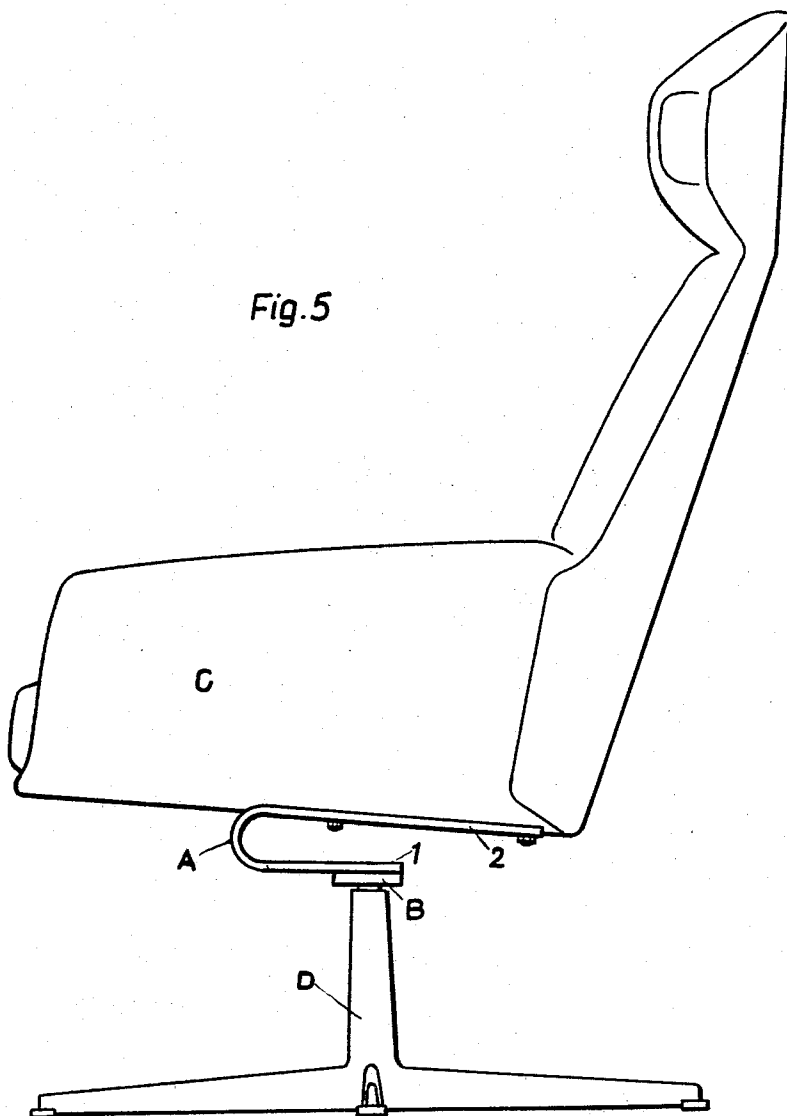
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CHAIR

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Fig. 5



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CHAIR

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Filed Apr. 23, 1965, Ser. No. 450,349

Claims priority, application Germany, Apr. 23, 1964,
H 52,480

5 Claims. (Cl. 297—300)

The invention concerns a resilient chair comprising leg means and seat means connected by spring means.

Known spring means for resilient chairs of this type have the drawback that—while permitting a rocking movement of the seat in one direction—they impart little or no resiliency to the seat in vertical direction. Apart from that these known spring means are structurally complicated and expensive.

It is an object of the invention to provide a spring arrangement for chairs of the aforementioned type which apart from giving the seat of the chair sufficient resiliency in vertical direction permits the seat to execute completely silent rocking movements towards all sides.

According to the invention this object is attained by using spring means comprising at least one U-shaped leaf spring, one of the substantially parallel arms of said leaf spring being connected to said leg means and the other arm of said leaf spring being connected to said seat means.

Preferably the spring means comprise at least two U-shaped leaf springs disposed side by side in substantially parallel relationship with their arms extending in two substantially horizontal planes, arms of said springs extending in one of said substantially horizontal planes being fastened adjacent their free ends to an intermediate member, said intermediate member being fastened to said leg means and the arms extending in the other substantially horizontal plane being fastened to said seat means.

Such an arrangement assures for all practical purposes a sufficient vertical resiliency for the seat without interfering in undesirable manner with rocking movements of the seat directed forwardly and rearwardly or towards the sides. Over and beyond that the device according to the invention is so simple that it can be manufactured without difficulties and high expense and be applied even to single chairs. The device is also easily adaptable to any type of chairs. Even expensive chairs of high artistic value can be furnished with these new spring means, as spring means of any required size can, if necessary, be manufactured by any mechanic without special equipment.

In an advantageous modification of the invention the new spring means is bent from a single flat bar so as to form two U-shaped springs disposed in side by side parallel relationship separated by a space, with an arm of one of said springs being connected across said space with an arm of the other one of said springs by a preferably curved connecting portion.

The leg means can, for instance, consist of a vertical post in which a seat supporting column is rotatably supported, as is customary for office furniture and the like. The leg means can, however, also consist of a normal three or four legged supporting structure. In the first case the intermediate member connecting the individual U-springs or the connecting portion of the unitary U-spring means can be fastened to the rotatable column

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whereas in the other case the intermediate member or a member attached to the connecting portion of a unitary spring means can be attached to frame parts connecting all or certain ones of the individual legs of the leg means. Preferably these frame parts are cross members connecting two legs disposed on each side of the chair.

Several modifications of the invention will now be described on hand of the accompanying drawings in which:

FIGURE 1 is a perspective view of a spring means according to the invention.

FIGURE 2 is a perspective view of a modified form of the spring means.

FIGURE 3 is a schematic view showing how a spring means according to the invention is fastened to a single post leg means.

FIGURE 4 is a view similar to FIGURE 3 showing the way of fastening the spring means to a chair frame with four legs, and

FIGURE 5 is a side view of a single post chair in which the spring means shown in FIGURE 1 is used for resiliently supporting the seat.

The spring means shown in FIGURE 1 consists of two horizontally disposed U-shaped leaf springs A having lower arms 1 which are shorter than the upper arms 2. The ends of the arms 1 are connected by an intermediate member B. The intermediate member is provided in its middle with an opening for receiving the upper end of the central column of a single post leg arrangement. The upper arms 2 are provided with holes for fastening these arms to the seat of the chair.

In the modification according to FIGURE 2 a unitary connecting portion connects the two lower arms of two leaf springs A, the two leaf springs and the connecting portion being formed by correspondingly bending a spring steel bar.

FIGURES 3 and 4 show how the modifications of the spring means according to FIGURES 1 and 2 are fastened to a single post rotatable leg arrangement and to the frame of a multiple leg chair respectively to the cross members connecting pairs of the chair legs.

FIGURE 5 shows the arrangement of the spring means according to FIGURE 1 between the seat C and the rotatable single post support D of a club chair.

What I claim is:

1. A chair comprising seat means having a front edge, leg means and spring means connecting said seat means to said leg means, said spring means constituting the sole connection between said seat means and said leg means and comprising leaf spring means with two pairs of substantially U-shaped arms, the arms of said arm pairs having different lengths and being disposed in substantially parallel relationship with the arms extending in two superposed substantially horizontal planes, the shorter arms in the lower one of said planes being connected with one another and with said leg means, and the longer arms being directly connected with said seat means with the U-bend of said arms disposed a substantial distance from said front edge of said seat means.

2. A chair according to claim 1 wherein the free ends of said lower shorter arms are connected by an intermediate member, said member being fastened in its center to a central post of said leg means.

3. A chair according to claim 1, characterized in that the free ends of said lower shorter arms are connected

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by an intermediate member and said member being fastened at its ends to said leg means.

4. A chair according to claim 1 wherein the free ends of said lower shorter arms diverge towards one another and are integrally connected with one another by a connecting portion, said connecting portion being affixed and connected at its middle portion to said leg means with the other interconnected arms secured directly to the side edges of said seat means.

5. In a yieldingly mounted seat structure capable of rocking movement towards all sides, comprising a pedestal base having an upright, a seat structure having front and side edges, and a pair of U-shaped leaf springs having upper arms of a greater length than the lower arms with the arms connected by a return bent portion, said upper arms being directly connected to the underside of said seat structure adjacent the side edges thereof, the return bent portions of said U-shaped leaf springs being spaced

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a considerable distance from the front edge of said seat and a rigid bar connecting the ends and shorter portions of the lower arms with said pedestal standard.

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