Dec. 15, 1936. L. J. ZERBEE 2,064,137

SPRING BASE FURNITURE

Filed Jan. 23, 1936

FIG. 1.

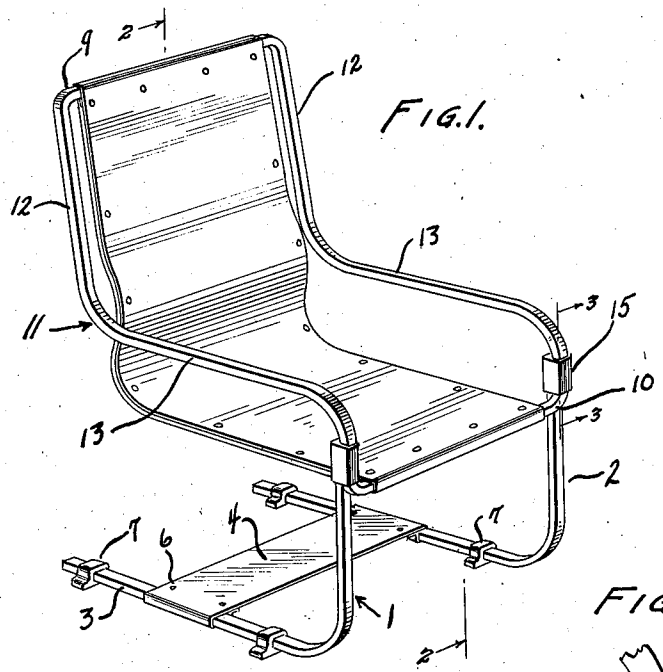


FIG. 3.

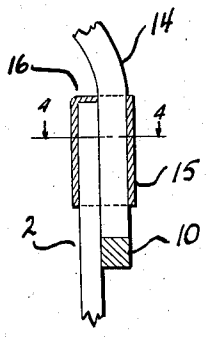


FIG. 5.

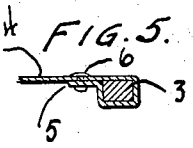


FIG. 6.

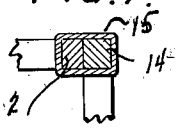


FIG. 7.



FIG. 2.

FIG. 4.



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SPRING BASE FURNITURE

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4 Claims. (Cl. 155—50)

My invention relates to furniture, and more particularly has reference to spring base furniture.

The spring base furniture heretofore used has had objectionable features. In much of the furniture of this type which is now in use, it is necessary to drill or punch apertures in the spring members in order that the article can be properly assembled. It is readily apparent that such furniture is subjected to great strain around the drilled apertures, which often results in the breakage of the spring elements.

This breakage of the spring elements not only renders the furniture unsafe, but also completely destroys its value. To overcome the above disadvantages, spring supporting members of relatively large spring stock have been employed. This not only increases the cost of manufacture, but also materially increases the weight of the furniture. Furthermore, no suitable means have been provided on the spring base members which will permit the free and complete movement of the said members. If the base member rests for its entire length on the floor surface, it will tend to rise up at the front end when the chair is rocked. In many of the spring base chairs, the base member has been provided with an upward bow which will prevent the tendency for the chair to rise at the front end. However, even with this structure, a forward and backward movement is set up in the terminals of the base members due to elongation caused by the downward movement of the bowed portion, when the chair is rocked. It is readily apparent that such movement of the base member will deface the surface of the floor and also cause bothersome noises.

The major object of my invention is to overcome the foregoing objectionable features in spring base furniture.

Another object of my invention is the provision of spring base furniture of lighter weight steel spring members.

A still further object of my invention is the provision of spring base furniture which can be readily assembled or disassembled in a minimum of time.

Yet another object of my invention is the provision of spring base furniture which eliminates any movement in the floor-engaging members relative to the surface of the floor.

A still further object of my invention is the provision of spring base furniture, the base members of which are provided with resilient means for preventing any horizontal movement of the base members relative to the floor but at the same time allowing bowing of the base members.

With these and other objects in view, which may be incident to my improvements, the invention consists in the parts and combinations to be hereinafter set forth and claimed, with the understanding that the several necessary elements comprising my invention may be varied in construction, proportions and arrangement, without departing from the spirit and scope of the appended claims.

In order to make my invention more clearly understood, I have shown in the accompanying drawing means for carrying the same into practical effect without limiting the improvements in their useful applications to the particular constructions, which, for the purpose of explanation, have been made the subject of illustration.

In the drawing,

Figure 1 is a perspective view of a chair constructed according to my invention;

Figure 2 is a side elevation of my invention;

Figure 3 is a view taken along the line 3—3 of Figure 1;

Figure 4 is a view taken along the line 4—4 of Figure 3;

Figure 5 is a view taken along the line 5—5 of Figure 2;

Figure 6 is a view taken along the line 6—6 of Figure 2;

Figure 7 is a view taken along the line 7—7 of Figure 2.

Referring to the drawing, and more particularly to Figures 1 and 2, I have shown a spring base chair constructed according to my invention, which is provided with two substantially L-shaped base members, generally designated 1. The members 1 consist of vertical portions 2 and horizontal portions 3. As best shown in Figure 2, the supporting members 1 are provided with a generous curve of approximately 90 degrees, where the vertical portions 2 join the horizontal portions 3.

The base is preferably made of spring steel of small stock, although other suitable resilient material can be used. While I have shown the spring members 1 as being of rectangular cross section, it is of course to be understood that these members can be of any desired configuration.

A cross member 4 of sheet steel or light flat stock is attached to the horizontal portions 3 of the base members substantially midway between their extremities.

As best shown in Figure 5, each end of the member 4 is folded around the portion 3 and

terminates in an extension 5 which fits snugly to the lower face of the cross member. Suitable securing means, such as rivets 6, secure the cross member 4 to the horizontal elements 3. It will be appreciated that the cross member 4 not only strengthens the base members 1, but it also tends to hold the horizontal portions 3 in parallel relationship.

It is readily apparent from the foregoing that the manner in which the cross piece is secured to the horizontal portions 3 eliminates any drilling of apertures in the spring members, which would tend to weaken the base members.

Floor-engaging pads 7 are adapted to be fitted onto the horizontal portions 3 at substantially the end portions thereof. The pads 7 are preferably made from rubber of a density which will enable the pads to absorb the movements of the base members when the chair is rocked. As best shown in Figure 7, the floor pads 7 are provided with an aperture which is of substantially the same size as the portions 3. This will enable the pads to be moved to the desired position on the members 3 where they will be held by friction. The foot portion 8 of the pads is of greater size than the remainder of the pad in order to afford a greater floor-gripping surface.

I have found that the rubber pads 7 are of paramount importance to the base members 1 of the chair. These pads will raise the horizontal portions 3 clear of the floor surface and will permit the free and complete movement of the spring elements. As is well known, there is a longitudinal movement in the terminals of the springs of the chair produced by the up and down bowing effect in the base members when the chair is rocked. However, the rubber pads 7 absorb the elongation of the springs due to the spring bow which occurs when the chair is rocked. This is due to the fact that the friction of the rubber on the floor is greater than the friction of the rubber within itself. Consequently, these pads prevent any creeping of the chair and thus eliminate the back and forth motion on the floor which mars the floor and also causes disagreeable noises.

The frame for the back and seat assembly is formed of steel stock similar to that employed for the base members 1. The frame is composed of two horizontal members 9 and 10 at the top and bottom respectively which are joined by means of side steel rails 11. As best shown in Figure 1, the rails 11 extend downwardly from the member 9, as shown at 12, and then curve outwardly to form arm rests 13. The arm rests 13 are provided with downwardly extending portions 14 which are joined to the horizontal member 10. Sleeves 15 are secured on the portions 14.

The sleeves 15 may be secured to the members 14 by welding or any other suitable method. These sleeves are preferably of sufficient length and of sufficiently heavy stock to withstand any strain imposed upon them.

Referring to Figure 3, it can be seen that the sleeves 15 are so formed and secured to the member 14 as to form a socket having its top wall closed as at 16. The sockets are of sufficient size to allow the vertical portions 2 of the base members 1 to abut against the lower faces of the top walls 16 of the sleeves 15. It is apparent that the sleeves 15 afford a union between the base members and the frame supporting the seat and back assembly without the necessity of drilling holes in the spring elements. Obviously, the danger of breakage of the spring members is reduced to a minimum, and the chair can be readily assembled or disassembled.

The back and seat members 17 and 18 are formed from a strip of metal fabric, wicker, or any other suitable resilient material. The back and seat members 17 and 18 are adapted to be secured to the horizontal members 9 and 10 in the same manner as the cross piece 4 is secured to the horizontal elements 3. The back 17 is preferably curved outwardly, as shown at 19, in order to form a comfortable back rest.

As can be best seen from Figure 6, the back and seat members are folded under along their outer edges, as at 20. Channel members 21 are secured along the portions 20 and by means of rivets or the like 22. It will be appreciated that the folded portions 20 in conjunction with the channel members 21 add rigidity to the back and seat members and will not permit these members to sag with the weight of the occupant's body.

It will be readily apparent from the foregoing description that I have provided a chair which can be made of lighter weight steel spring members than was heretofore possible. Furthermore, spring base furniture constructed according to my invention is much safer due to the fact that it is not necessary to drill holes in the spring supporting elements in order to properly assemble the article. Likewise, the provision of the floor pads 7 on the base members will prevent creeping of the chair and any horizontal movement of the base members when the chair is rocked. It will be appreciated that the prevention of such movement of the base members will eliminate marring of the floor surfaces and also undesirable noises.

While I have shown and described the preferred embodiment of my invention, I wish it to be understood that I do not confine myself to the precise details of construction herein set forth, by way of illustration, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claims. It is of course apparent that while I have described my invention with relation to a chair, it is equally applicable in the case of other furniture, such as settees, for instance.

I claim:

1. In an article of furniture, a flexible metallic base member comprising a pair of L-shaped base members composed of a horizontal portion and a vertical portion, a cross member connecting the horizontal members at approximately their mid portions by passing around said horizontal portions, a rubber floor engaging pad fastened around the extremities of each horizontal portion for raising the base members clear of the floor and permitting flexing of the base members between the rubber pads, and at the same time preventing any horizontal movement of the base members relative to the floor, and a seat and back assembly secured to the free ends of the vertical portions by the use of sleeve means.

2. In an article of furniture, a pair of flexible metallic base members each composed of a horizontal portion and a vertical portion, a cross member connecting the horizontal portions at approximately their mid portions, rubber floor-engaging pads mounted on the base members at substantially the extremities of the horizontal portions for raising the base members clear of the floor and permitting flexing of the base members between the rubber pads and at the same time

preventing any horizontal movement of the base members relative to the floor, and a seat and back assembly secured to the free ends of the vertical portions by the use of sleeve means.

3. In an article of furniture comprising a base member having a flexible horizontal member and an upright member rigid therewith, a seat assembly secured to the upright member, said horizontal member being provided with two floor-engaging portions at least one of which is a floor-engaging pad composed of yielding material such as rubber mounted at substantially one of the ends of the horizontal member for raising said end of the horizontal member clear of the floor and providing for flexing of said horizontal member between said floor-engaging pad and the other floor-engaging portion and at the same time preventing any relative movement of the floor contacting surfaces of the floor-engaging portions.

4. In an article of furniture comprising a pair of metallic base members, each having a flexible horizontal portion and a single upright portion rigid therewith, a seat assembly secured to the upright portions, rubber floor engaging pads mounted on the horizontal portions at substantially the ends thereof for raising said horizontal portions clear of the floor and permitting flexing of said portions between the rubber pads and at the same time preventing any relative movement of the floor contacting surfaces of the rubber pads.

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