Sept. 13, 1938. C. H. OERMANN 2,130,022

CHAIR

Filed July 20, 1937

Fig. 1

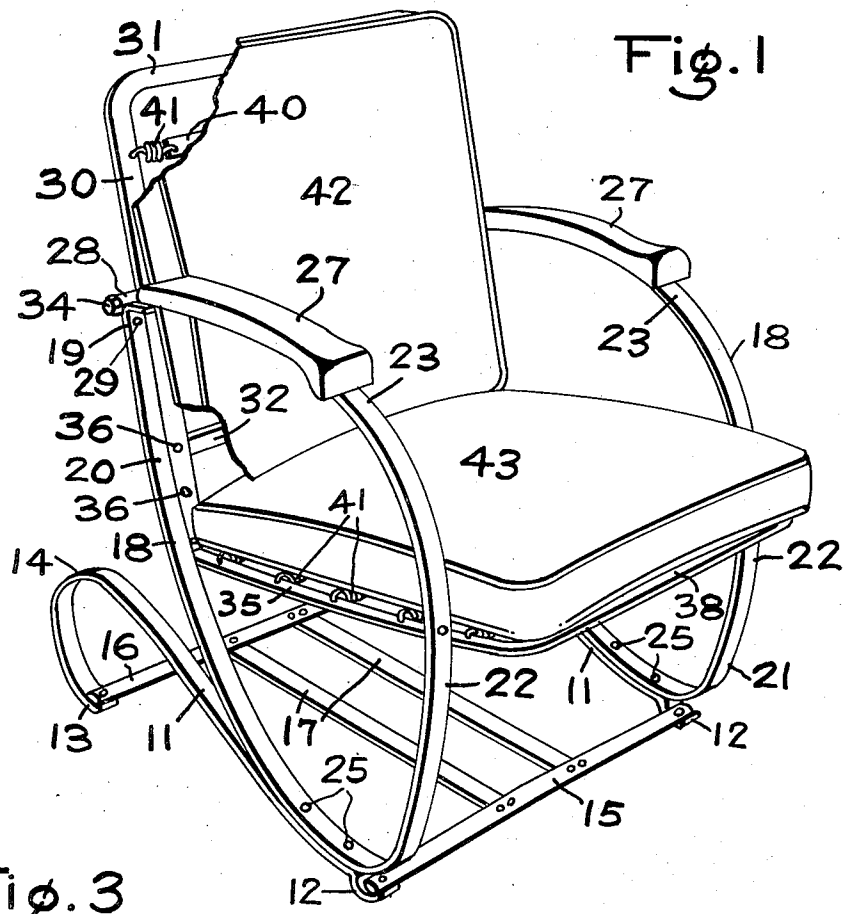
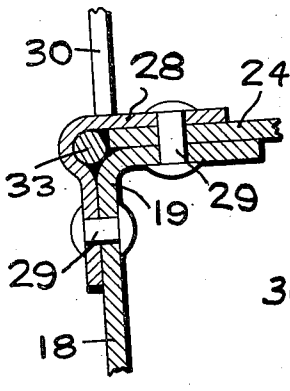


Fig. 3



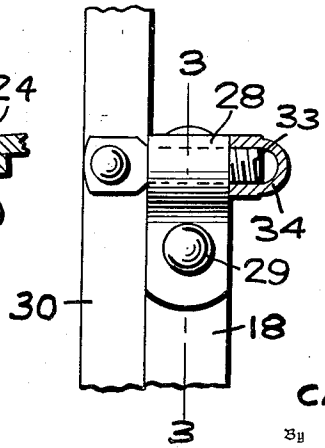
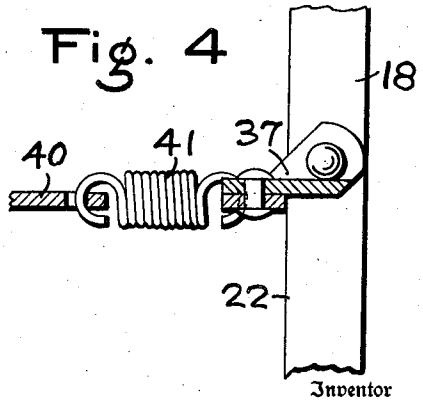


Fig. 2

Fig. 4



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CHAIR

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4 Claims. (Cl. 155—54)

This invention relates to resilient seat structures.

An object of the invention is to provide an improved seat structure having an elastic frame formed from spring members so that a seat member may move rearwardly and forwardly in the manner of a rocking chair.

Another object of the invention is to provide an improved seat structure having ovoid-shaped side members adapted to support the back and seat frames of the device, the side members in turn being supported by a pair of bars having front and rear feet and an intermediate portion spaced from the floor and shaped in such manner as to flexibly support the super structure of the device.

With the foregoing and other objects and advantages in view, the invention consists in the preferred construction and arrangement of the several parts which will be hereinafter fully described and claimed.

In the accompanying drawing:

Figure 1 is a perspective of a chair embodying the invention;

Fig. 2 is an enlarged rear elevation of a portion of the structure shown in Fig. 1, showing the manner in which the back frame is connected to a side member;

Fig. 3 is a vertical section taken along the line 3—3 of Fig. 2; and

Fig. 4 is a detail view partly in section showing the manner in which the front portion of the seat frame is connected to a side member.

Referring to the drawing, the base portion of the seat structure comprises a pair of spring bars 11 located along the sides of the device.

Each bar 11 has a front floor engaging portion or foot 12, and a rear floor engaging portion or foot 13, said feet being spaced a suitable distance apart from front to rear, preferably a distance slightly greater than the length of the seat, so as to enhance the stability of the device and prevent tilting thereof forwardly and rearwardly by an occupant.

The bars 11, except for the portions forming the feet 12 and 13, are in spaced relation with the floor. Between the front and rear feet, the bars 11 are curved gradually upwardly from the front feet 12 for a distance substantially equal to the distance between the front and rear feet or floor engaging portions of the device. At the rear the bars are bent around, as indicated at 14, and thence extend downwardly and forwardly. The portion 14 is to the rear of the feet 13. The construction of the bars 11 is such as to provide elastic means for flexibly supporting the seat structure.

In order to prevent spreading of the feet 12 and 13, the front feet 12 are connected by a cross bar 15 and the rear feet 13 are connected by a cross bar 16. The cross bars 15 and 16 are in turn connected by straps 17. These straps prevent relative movement of the cross bars 15 and 16, and consequently the feet 12 and 13 are retained in position on the floor, even when the chair is occupied.

Each of the bars 11 supports a side member 18 formed preferably from a single length of bar metal bent somewhat in the form of an ovoid or egg.

From one end 19, the bar 18 extends downwardly and forwardly, as indicated at 20, gradually increasing in curvature towards the lower portion of the side member. At the lower portion the bar 18 is rounded to form a nose 21. From the nose 21 the bar is curved upwardly and forwardly, as indicated at 22, and thence said bar is curved rearwardly in a gradual curve 23, which terminates at an end 24.

The portion 20 of the member 18 constitutes the rear portion of the side member. The portion of the side member 18 rearwardly from the nose 21 constitutes the main supporting portion of said member and this portion is secured to the bar 11 at a point adjacent the front foot 12 by suitable securing elements, such as rivets 25. The portion 22 functions as a front leg, and such portion is adapted to support the front portion of the seat structure, as will be hereinafter more fully described. The portion 23 functions as an arm rest, and if so desired an arm rest member 27 of suitable form may be mounted thereon. The two ends 19 and 24 are secured to a bracket 28 by rivets 29, as shown in Fig. 3.

The back frame structure comprises a frame consisting of side bars 30, an upper cross bar 31, and a lower cross bar 32.

At a point intermediate of the back frame, each side bar 30 carries a laterally projecting threaded stud 33 which is inserted in an opening formed between the bracket 28 and the adjoining end portion of the side member 18, as shown in Fig. 3. A nut 34 mounted on the end of the stud 33 secures the side bar 30 to the side member 18.

The seat frame structure is a continuation of the back frame and comprises side bars 35 which are connected at their rear ends to the lower ends of the back bars 30, as indicated at 36.

The front portions of the side bars 35 are con-

nected to the portions 22 of the members 18, by a bracket 37 (see Fig. 4).

The front ends of the side bars 35 are connected by a cross bar 38.

If so desired, the portions 30 and 31 of the back frame and the portions 35 and 38 of the seat frame, may each be formed of a single bar bent in the form of a U, the free ends of the bars being riveted together, as indicated at 36.

Any form of back and seat supporting means may be employed. In the present instance the side bars of both the back frame and the seat frame are spanned by a plurality of thin metal straps 40, the ends of said straps being spaced from the side bars and being connected thereto by stiff coil springs 41. The straps 40 are disposed at suitable intervals throughout the length of the back frame and the seat frame and provide means for supporting a back cushion 42 and a seat cushion 43, as shown in Fig. 1.

The sides 18 are constructed of relatively stiff metal bars, and, therefore, are not adapted to flex when the chair is occupied. On account of the manner in which the sides 18 are mounted on the bars 11 and secured thereto, the bars 11 will flex under the weight of an occupant of the chair, and in so doing, the super structure will tilt rearwardly and forwardly, simulating the motions of a rocking chair.

Having thus described my invention, what I claim is:

1. Seat structure comprising a pair of supporting bars, each having a front foot and a rear foot with the portion of the bar between said feet curved gradually upwardly from the front foot rearwardly and at the rear bent around and thence downwardly and forwardly towards the rear foot, a pair of side members of ovoid shape having a lower apex portion resting on said bars and connected thereto at a point adjacent to the front feet, a back frame connected intermediate its length to the upper rear portion of said side members, and a seat frame extending forwardly from the back and connected at its front end to the front portion of said side members.

2. Seat structure comprising a pair of supporting bars, each having a front foot and a rear foot with the portion of the bar between said feet curved gradually upwardly from the front foot rearwardly and at the rear bent around and thence downwardly and forwardly towards the rear foot, a pair of side members of ovoid shape having a lower apex portion resting on said bars and connected thereto at a point adjacent to the front feet, a back frame connected intermediate its length to the upper rear portion of said side members, and a seat frame extending forwardly from the back and connected at its front end to the front portion of said side members, the front portions of said side members between the point at which the seat frame is connected thereto and the upper rear portion thereof being shaped to form arm rests.

3. Seat supporting structure comprising a pair of resilient bars, each having a front foot and a rear foot with an intermediate portion between said feet curved gradually upwardly from the front foot rearwardly and then at the rear bent around and thence downwardly and forwardly towards the rear foot, said bent around portion of the bars overlying the rear feet, a pair of rigid side members of ovoid shape having a lower nose portion resting on said bars and connected thereto adjacent the front feet portion thereof, a back frame structure connected intermediate its length to the upper rear portion of said side members, and a seat structure extending forwardly from the back and connected at its front end to the intermediate front portion of said side members.

4. Seat supporting structure comprising a pair of bars, each having a front foot, a rear foot, and an intermediate portion curved upwardly from the front foot, the entire portion of said bars between the front and rear feet being spaced above the floor, side members superposed upon the bars and fixed thereto near the front ends thereof, each of said side members being constructed from a single length of metal bent substantially in the form of an ovoid and having its ends connected and disposed at the upper rear portion of the side members, a back frame connected intermediate its length to the connected end portion of the side members, and a seat frame extending forwardly from the back frame and connected at its front end to the front portion of said side members.

CARL H. OERMANN.