Jan. 2, 1934. W. R. McGOWEN 1,942,302

FURNITURE

Filed Dec. 10, 1932

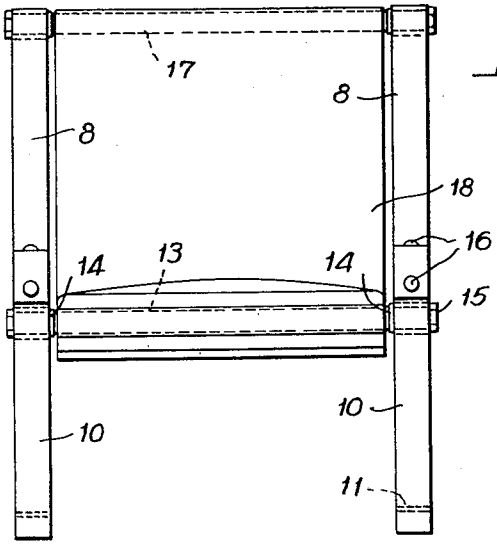



Fig. 1.

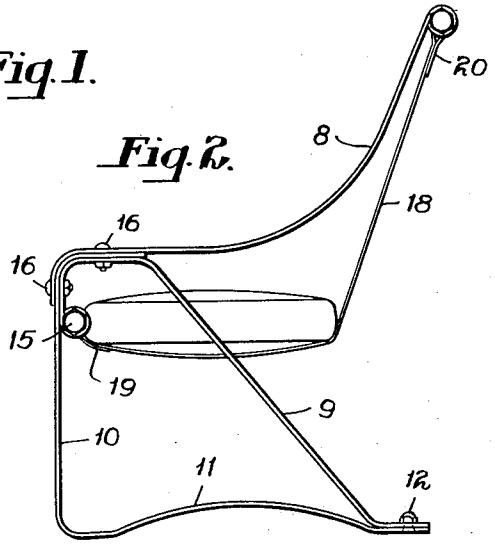



Fig. 2.

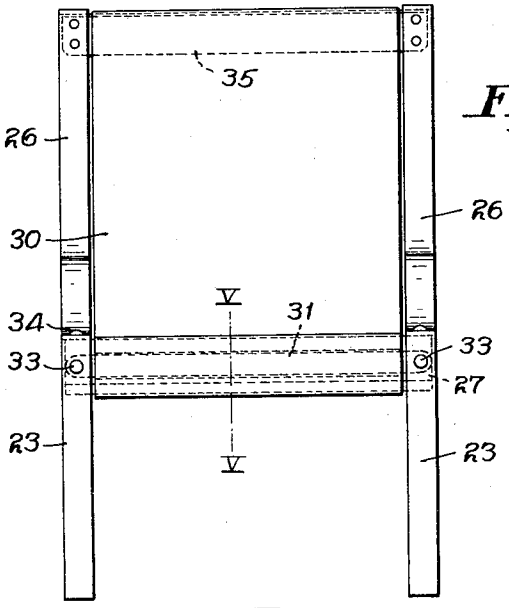



Fig. 3.

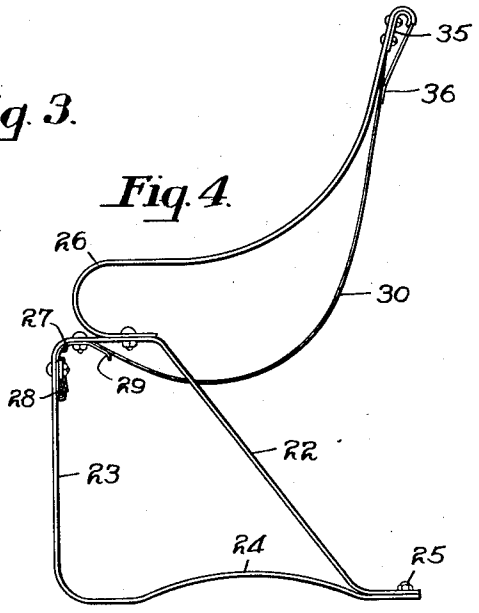



Fig. 4.

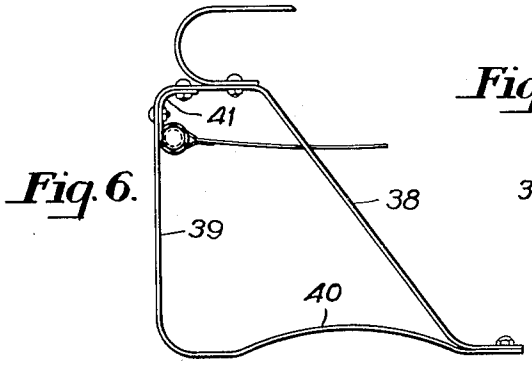



Fig. 6.

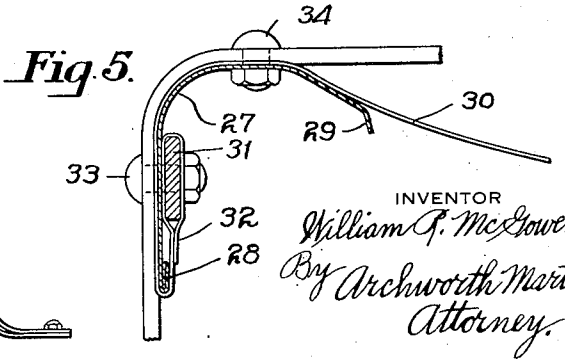



Fig. 5.

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Patented Jan. 2, 1934 1,942,302

# UNITED STATES PATENT OFFICE

1,942,302

## FURNITURE

William R. McGowen, Pittsburgh, Pa., assignor to The McKay Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 10, 1932
Serial No. 646,621

2 Claims. (Cl. 155—50)

This invention relates to furniture, such as chairs, and other seating structures, and constitutes in part a continuation of my application, Serial No. 596,779, filed March 4, 1932.

The invention relates to that type of chair commonly composed of metal strips, bars or rods, or other material which will produce a frame that is yieldable under the weight of a sitter.

One object of my invention is to provide a chair structure wherein the frame and leg members are yieldable, with provision for increasing the stability of the legs, and for preventing creeping of the chair on the floor through flexing of any of the leg members.

Another object of my invention is to provide an improved and simplified means for connecting a seating strip or other cushion-supporting member to a metal frame.

As shown in the accompanying drawing, Figure 1 is a face view of the chair; Fig. 2 is an end elevational view thereof; Fig. 3 is a face view showing a modified form of chair; Fig. 4 is an end elevational view thereof; Fig. 5 is a view taken on the line V—V of Fig. 3, on an enlarged scale, and Fig. 6 shows another modification of the structure of Fig. 2.

The structure, broadly speaking, consists of end frame portions connected by cross bars at the front and rear sides, to which cross bars a canvas strip or other seating support is connected.

Each end frame consists of a side bar 8, a rear leg member 9 and a front leg member 10, the members 9 and 10 being connected by a brace bar 11, which may constitute an integrally-formed extension of the leg 10. The members 8, 9, 10 and 11 are preferably made of yieldable material such as steel, and in practice, are enameled, chromium-plated, or otherwise treated to give them a pleasing appearance.

The members 9 and 11 are connected at their rear ends by a rivet or bolt 12. The upper ends of the legs 9 are curled to form eyes which receive the ends of a tubular cross bar 13, the bar being provided with beads or annular ribs 14 against which the inner ends of the eyes abut, and the eyes are held in tight engagement with the said beads by means of clamping nuts 15 that may have threaded engagement with the tube 13. Any other suitable fastening means may be provided for connecting the cross bar to the leg members, as for example, some of the forms shown in my copending application, Serial No. 575,761, filed November 18, 1931.

The members 8, 9 and 10 are connected together by bolts 16, and the upper ends of the side bars 8 are connected by a cross bar 17 that corresponds to the bar 13, the upper ends of said bars 8 being curled to form eyes. A strip 18 of flexible material such as canvas or spring metal strips has its ends looped around the bars 13 and 17, and fastened to the body of the strip as at 19 and 20.

It has been found that when the legs 9 or 10, or both, are flexed through the weight of a sitter, such flexing movements will result in creeping of the chair along the floor, especially when the sitter oscillates himself to produce a rocking motion, through flexing of the side bars 8. This creeping action takes place even though the lower ends of the legs 9 and 10 are rigidly connected, as by a straight bar. However, I have found that by forming the brace bar 11 of such gauge that it will yield slightly, and with the bar curved as shown in Fig. 2, this walking or creeping action is prevented, probably because the flexing stresses in the legs 9 and 10 are absorbed in the bowed portion of the bar 11.

Referring now to Figs. 4 and 5, I show a structure having a leg arrangement somewhat similar to that of Fig. 2, but wherein the leg members 22, 23 and 24 are formed of a single strip of material, the ends of the strips being bolted together at 25. The side bars 26 are bent to semi-circular form at their front ends, and bolted to the upper portion of the leg structure.

The end frames are connected together by a metal plate 27 of generally channel form, but having its edges bent as at 28 and 29 to prevent cutting and wear on the canvas seating strip 30. The forward edge of the seating strip is looped around a bar 31, and fastened to itself at 32. The bolts 33 extend through the bar 31, the cross plate 27, and the leg portions 23, and bolts 34 are provided as additional fastening means for connecting the cross plate 27 to the end frame.

The upper rear ends of the side bars are connected by a metal plate 35 which is bolted at its ends to said bars. The canvas strip 30 extends around the upper curled edges of the plate 35, and is secured to the body of the strip at 36.

In Fig. 6, I show a structure wherein the leg portions 38, 39 and 40 are formed of a single piece, as in Fig. 4, but wherein a different form of cross bar is employed for connecting the end frames together. In this latter structure, a metal strip 41 is bolted to the legs, and has its lower end curled to form an eye for receiving the end of a tubular cross bar, as in the structure of Figs. 1 and 2.

I claim as my invention:—

1. Seat structure comprising a frame having front and rear legs, the front legs and the rear legs being connected at their upper ends by horizontally-extending portions, yieldable side bars bent to approximately semi-circular form at their forward ends and having the shorter legs of their bent portions disposed in parallelism with and secured to the said horizontal portions, the longer portions of the side bars extending rearwardly and upwardly, a cross bar connecting the side bars adjacent to their upper ends, a cross bar secured to the front portion of the frame, and a seat supported from the said cross bars.

2. Seat structure comprising a pair of end frames each having a front leg and a rear leg connected at their upper ends, a yieldable side bar disposed above each pair of legs and bent to approximately semi-circular form with a straight extension at the lower portion of the bend secured flatwise to the upper portions of the legs, means for connecting the upper portions of the side bars, means connecting the front portions of the end frames, and a seat suspended from said two connecting means.

WILLIAM R. McGOWEN.