

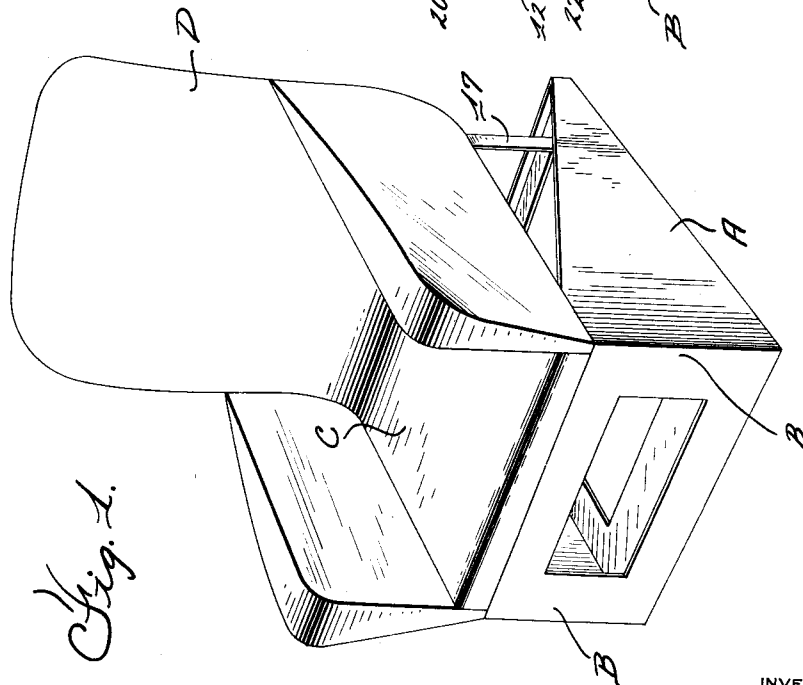
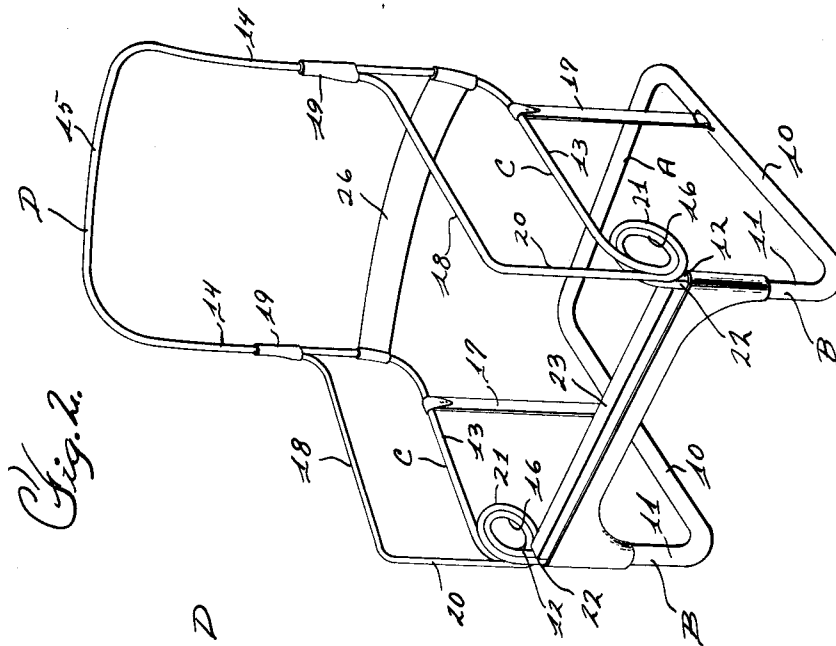
Dec. 8, 1936.

A. P. BALL

2,063,780

CHAIR

Original Filed June 1, 1931 2 Sheets-Sheet 1



INVENTOR
Albert P. Ball

BY
e Hutton Hullcut W Hutton Belknap
ATTORNEYS

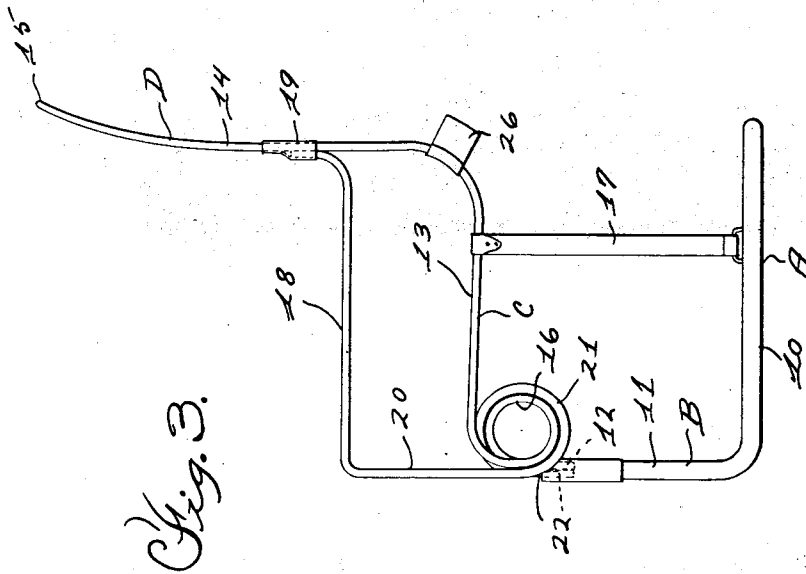
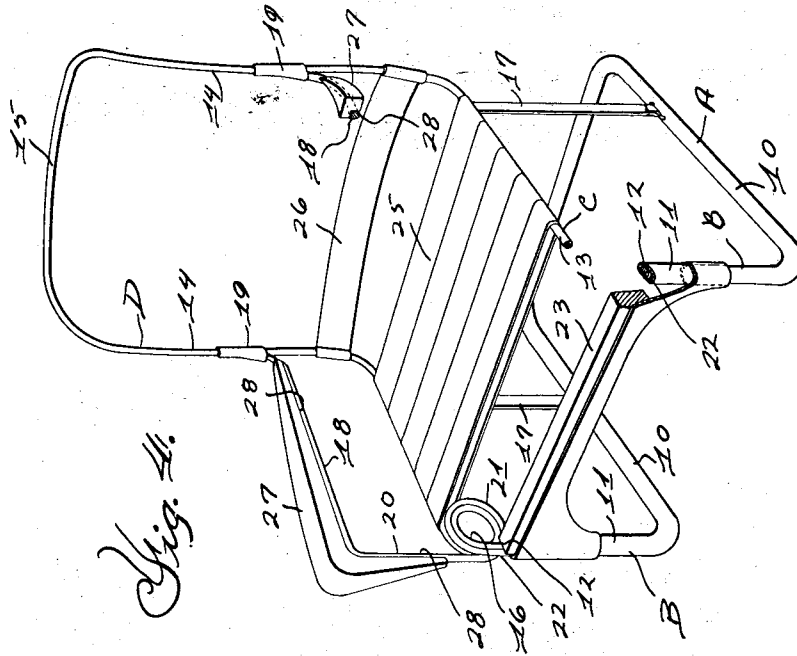
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CHAIR

Original Filed June 1, 1931 2 Sheets-Sheet 2



INVENTOR

Albert P. Ball

BY

BY W. Whitmore, Hubert W. Whitmore & Belknap

ATTORNEYS

UNITED STATES PATENT OFFICE

2,063,780

CHAIR

Albert P. Ball, Detroit, Mich., assignor to Briggs Manufacturing Company, Detroit, Mich., a corporation of Michigan

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3 Claims. (Cl. 155—50)

This invention relates to chairs and the like and more particularly to improvements in the construction of chair frames.

One of the objects of this invention is to provide a chair having a frame formed of bar, rod or tubular metal stock bent to form a floor engaging portion, a vertically spaced seat supporting portion and a back portion, together with coil portions between the seat and floor portions permitting vertical angular movement of the seat supporting portion due to the resiliency afforded by the coils.

Other objects, advantages and novel details of construction of this invention will become more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein

Figure 1 is a perspective view of a chair constructed in accordance with my invention, the same being shown trimmed;

Figure 2 is a perspective view of the frame of the chair with the trimming material omitted;

Figure 3 is a side elevation of the structure illustrated in Figure 2; and

Figure 4 is a fragmentary sectional perspective view showing the chair frame with some of the trimming material attached.

Referring now more especially to Figures 1 to 4 inclusive of the drawings, it will be noted that the stock from which the frame of the chair is constructed is shaped to form a floor or ground engaging portion A, uprights or vertically extending leg portions B, horizontally extending seat portions or seat supporting portions C, and an upright back portion D.

The floor engaging portion A is preferably, although not necessarily, substantially U-shaped in plan view and comprises a pair of spaced parallel side portions 10 extending from the front to the rear of the chair structure, these side portions 10 being bent upwardly to provide upright portions 11 constituting a portion of the leg portions B.

In the form of the invention illustrated in Figures 1 to 4 inclusive, the floor engaging portion A is in the form of a hollow tubular member and the upright ends 11 thereof are flattened to receive therein the vertically extending ends 12 of the horizontally extending seat supporting portions 13. The seat supporting portions 13 are formed preferably from a single length of spring steel rod stock or the like, which is bent to form a vertically extending U-shaped portion comprising upright portions 14 and a transverse portion

15 which together constitute the back of the chair frame.

Each vertical leg portion 12 and horizontal seat supporting portion 13 are formed at their juncture with a coil 16 as clearly illustrated, these coils permitting vertical angular movement of the seat supporting portion 13 due to the resiliency of the metal stock from which the coils are made. In other words the seat supporting portion 13 of the frame may rock downwardly toward the floor engaging portion A from the position of rest illustrated in Figures 1 to 4, when the seat is occupied.

The relative vertical angular movement in an upward direction of the seat supporting portion is resisted by check straps 17 or the like, arranged between the spaced parallel horizontal portions 10 and seat supporting portions 13 of the frame, these check straps being connected respectively to these portions. Obviously, these check straps permit downward swinging movement of the seat portion, the check straps being flexible but limit upward movement of the seat portion to a position substantially parallel with the floor supporting portion.

At this point it will be well to note that at each side of the chair frame the spaced horizontal portions 10 and 13 are connected at their forward ends by the vertical leg portions 11—12, these parts forming substantial U-shaped portions at each side of the chair frame.

The reference character 18 indicates arm portions formed also preferably of spring steel rod stock, the rear ends of these arm portions 18 being attached, for instance, by means of sleeves 19 to the upright back portions 14, the forward ends of these arm portions being bent to provide vertical portions 20 shaped to form coils 21 companion to the coils 16 previously referred to, the free ends 22 of the arm portions being received within the open upper ends of the upright portions 11 of the floor engaging members.

These arm portions 18 provide angular braces which assist in strengthening the seat portion, the coils 21 thereof functioning during the rocking movement of the seat to resiliently permit this rocking movement and at the same time resisting undue movement thereof and returning the seat to its normal position of rest.

It will be understood that the seat portions 13, the arm portions 18, and the back oscillate or swing about a center comprising the coils 16—21.

While obviously a chair frame constructed as heretofore described may be trimmed and finished in any desired or preferred manner, I have herein

illustrated one way in which the frame may be trimmed to provide a comfortable seat as well as an attractive one.

5 The reference character 23 indicates a transverse frame member extending between the upright leg portions substantially at the juncture of the upright leg portions and the seat portion, thus providing a substantially rigid transverse frame member to prevent sagging of the seat proper
10 when occupied. This transverse frame member may be of wood or any other suitable material and arranged adjacent thereto I preferably provide a sheet metal member which embraces the wood member 23 as illustrated most clearly in
15 Figure 4.

The seat proper may be formed by wrapping a fabric strip 25 around the seat supporting member 13 as also most clearly illustrated in Figure 4. A spacer bracing member 26 is preferably provided between the upright portions 19 of the back, this transverse brace member resisting any tendency of the frame to collapse inwardly when the seat portion 25 is occupied.

25 The arm portions 18 may be provided with arm rests 27 formed of wood or any other suitable material, these arm rests being provided with relatively wide flat upper surfaces upon which the arms of the occupant of the chair may comfortably rest. The under side of these arm rest portions 27 are formed with rabbets 28 to receive the portions 18 and 20, the arm rests being secured thereto as, for instance, by means of clips, staples or the like, not shown.

30 In Figure 1 the entire structure is shown as trimmed by being encased in a cloth or fabric covering which substantially encloses the back, arms, seat and leg portions. To those skilled in this art it will be apparent that the trimming is principally a matter of taste and design and
40 forms no essential part of this invention.

In the former construction hereinbefore described the floor engaging member is illustrated as formed of a tubular pipe-like member. One advantage of the tubular floor engaging portion

terminating in the upright leg portion 11, is that this structure is more rigid.

Obvious modifications will suggest themselves to those skilled in this art and to this end reservation is made to make such changes as may come
5 within the purview of the accompanying claims.

What I claim as my invention is:

1. A chair frame including, a substantially U-shaped floor engaging member formed of tubular stock with the ends of said U-shaped member extending vertically to form upright leg portions, substantially horizontal seat supporting portions terminating in coils at one end thereof with the free ends of said coils extending vertically downwardly, arm rest members, the said free ends of said coils and the ends of said arm rest members being secured in the open ends of the upright leg portions of said tubular floor engaging member to connect said seat supporting portions
10 thereto.

2. A chair frame including, a floor engaging portion having upright leg portions, seat supporting portions terminating in coils at one end thereof, arm members connected to said seat supporting portions and terminating in coils arranged in juxtaposition to said first coils, and means for securing the free ends of said first and second mentioned coils to said upright leg portions.

3. A chair frame including, a floor engaging portion having upright leg portions, seat supporting portions terminating in coils at one end thereof, upright back portions connected to said seat supporting portions, arm members each comprising a substantially horizontal part connected to said upright back portion and a substantially right angularly extending part terminating in a coil, the coils of the arm members and of said seat supporting portions being arranged in pairs with the free ends of said pairs of coils secured respectively to said upright leg portions to connect said seat portions to said leg portions, said angular arm members acting to brace said structure.
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ALBERT P. BALL.