

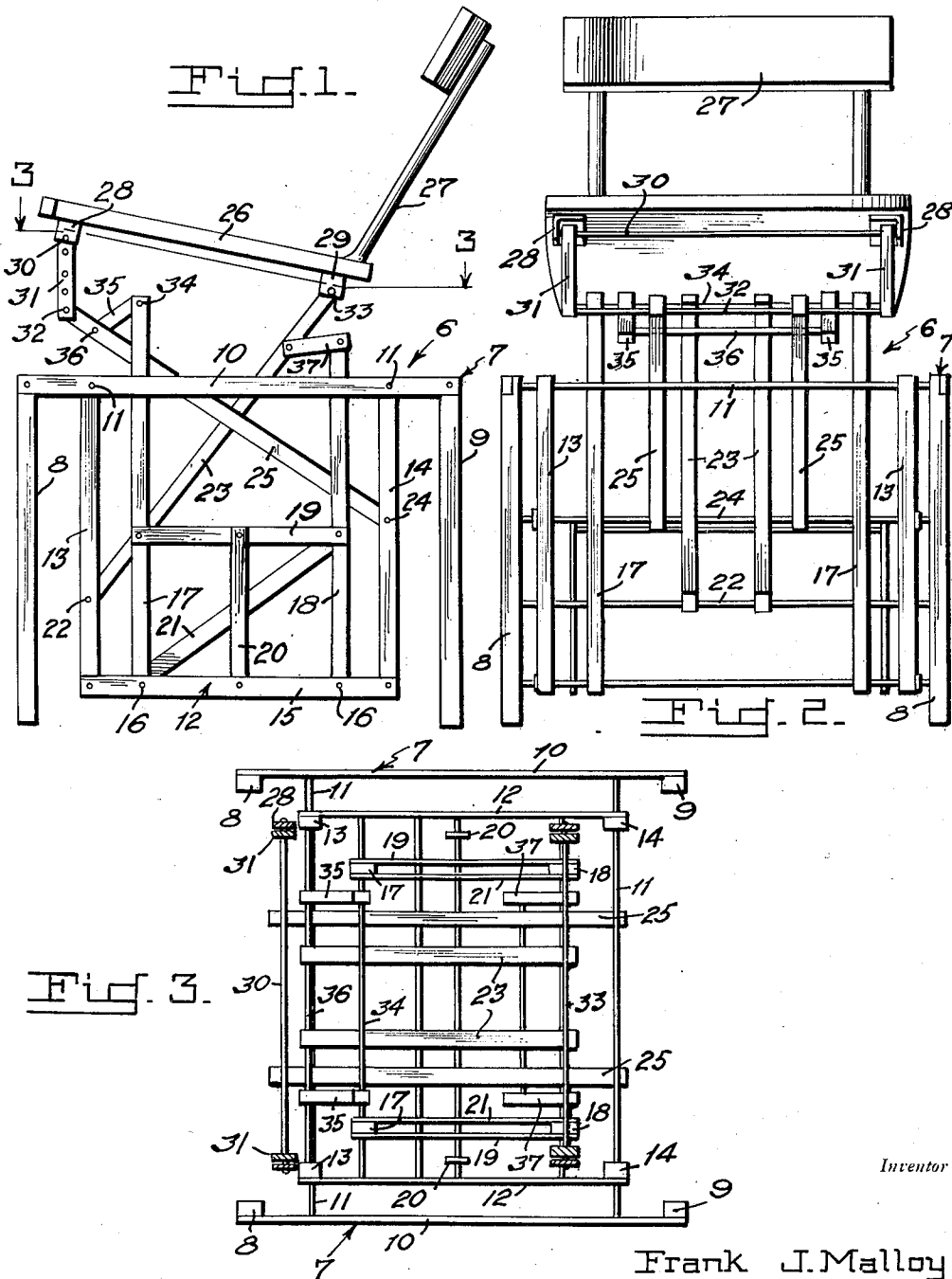
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F. J. MALLOY
SWING MOUNTING

2,514,713

Filed March 7, 1947

2 Sheets-Sheet 1



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Fig. 4.

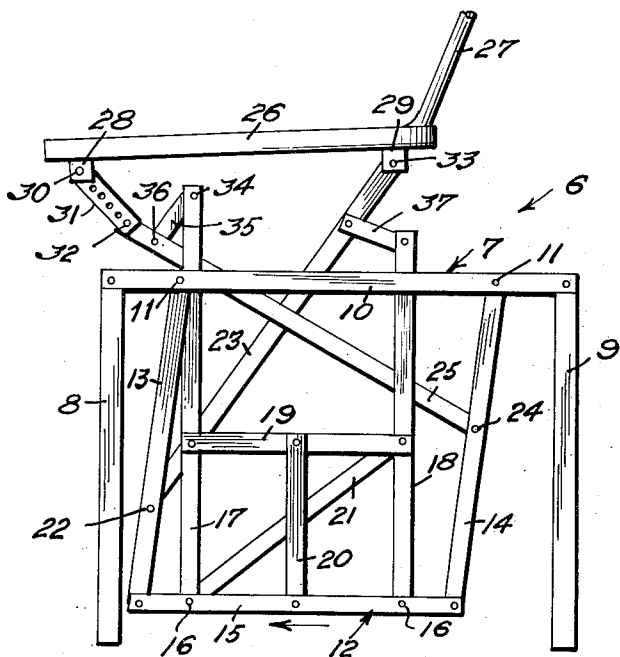
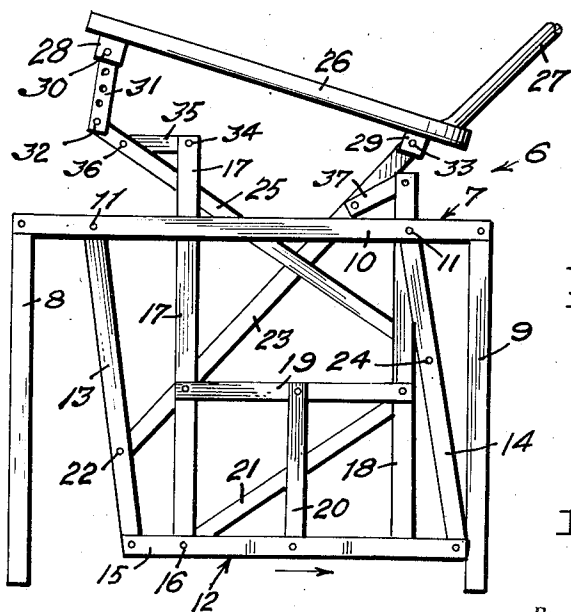


Fig. 5.

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UNITED STATES PATENT OFFICE

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SWING MOUNTING

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7 Claims. (Cl. 155—61)

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This invention relates to a novel construction of swing mounting adapted to be used in conjunction with furniture for mounting a seat or bench as a rocker or swing and relatively to a fixedly disposed frame to thus provide a unique construction of swing mounting between a fixedly disposed supporting structure and a movably disposed seat or bench structure.

More especially, it is an object of the present invention to provide a mounting capable of being used with various types of furniture for swingably supporting the seat and backrest portions thereof relatively to a fixedly disposed supporting frame structure.

Still a further object of the invention is to provide a swingable mounting which is constructed and arranged to cause a seat or bench or other structure, supported swingably thereby, to rock or pivot relatively to its rigid supporting frame as the seat or swing structure is swung relatively thereto to thus create a combination swing and rocker.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view showing the invention in an idle or intermediate position;

Figure 2 is a front elevational view thereof;

Figure 3 is a horizontal sectional view taken substantially along a plane as indicated by the line 3—3 of Figure 1;

Figure 4 is a side elevational view showing the complete structure swung to a forward position and rocked forwardly, and

Figure 5 is a similar view showing the structure swung and rocked rearwardly.

Referring more specifically to the drawing, the improved combination swing and rocker in its entirety is designated generally 6 and includes two supporting frame members each, designated generally 7, and each of which comprises front and rear uprights 8 and 9, respectively, which are connected at their upper ends by a cross-bar 10 and the lower ends of which are adapted to rest on any suitable supporting surface.

The cross-bars 10 of the two supporting frames 7 are connected adjacent their ends by rods 11 on which are swingably supported the hanger frames 12 which include a pair of spaced uprights 13 and 14, forming a part of each hanger frame 12 and one of which uprights of each frame is swingably supported by each of the rods 11. Each of the frames 12 also includes a lower cross-bar

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15 which is pivotally connected at its ends to the lower ends of the hanger bars 13 and 14 of the said frame 12.

The bottom bars 15 of the frames 12 are connected by rods 16 which extend therebetween and a pair of upright standards 17 are pivotally mounted at their lower ends on the forward rod 16 and two upright standards 18 are pivotally mounted on the rear rods 16, said standards 17 and 18 being disposed between and adjacent the frames 12. The standards 17 and 18 which are in alignment, looking from front to rear of the structure 6, are connected by cross braces 19 pivotally to said uprights 17 and 18. Upright braces 20 are disposed between and pivotally connected to the complementary cross-braces 19 and cross-bars 15 and said uprights 17 and 18 are reinforced by diagonal braces 21 which are pivotally connected thereto.

A rod 22 extends between the hanger bars 13 for pivotally supporting a pair of diagonal braces 23 which are pivotally connected thereto and which extend upwardly and rearwardly therefrom. The rear hanger bars 14 are connected by a rod 24 which is disposed above the level of the rod 22 and to which are connected two diagonal braces 25 which extend upwardly and forwardly therefrom and which cross the braces 23 on the outer sides thereof and which are likewise pivotally mounted relatively to said hanger bars 14.

A seat 26 provided with a back rest 27, has depending lugs 28 and 29 located adjacent the corners thereof. The lugs 28 are located adjacent the front edge of the seat 26 and are connected by a transverse rod 30 to which a pair of links 31 are pivotally connected. The depending ends of the links 31 are adjustably and pivotally connected to the upper forward ends of the diagonal members 25 by a rod 32 which extends therebetween and which is engaged by each of the parts 25 and 31. A rod 33 extends between the lugs 29 and is pivotally engaged by the upper ends of the diagonal members 23.

The upper ends of the uprights 17 engage a rod 34 which extends therebetween and to which is connected the corresponding ends of two links 35, the opposite ends of which pivotally engage a rod 36 which extends between the diagonal braces 25 and adjacent the rod 32.

The upper ends of the rear uprights 18 are pivotally connected to the diagonal braces 23 by links 37.

From the foregoing it will be readily apparent that when the seat structure 26 is swung forwardly, as seen in Figure 4, that the hanger frame

12 will be swung forwardly relatively to the supporting frame 7, the hanger bars 13 and 14 swinging on their pivot points 11 relatively to the cross-bars 10. This will cause the links 31 to be moved substantially into alignment with the diagonal braces 25 due to the fact that the uprights 17 will be raised relatively to the seat 26 for drawing upwardly on the forward ends of said diagonal members 25 and uprights 17 moved forwardly at a faster rate than bars 25, causing the front ends of members 25 to draw the seat downwardly. At the same time the uprights 18 will be moved forwardly, being maintained parallel to the uprights 17 by the braces 19, thereby causing the diagonal braces 23 to be rocked forwardly, through the link connection 37 between said uprights 18 and the braces 23, for elevating the rear portion of the seat 26 as the forward part thereof is depressed and as the seat 26 is swung in a forward direction relatively to the frame structure 7.

Conversely, when the hanger frames 12 swing rearwardly, as seen in Figure 5, the uprights 17 and 18 will be moved rearwardly while being maintained in substantially upright positions, as in Figures 1 and 4, so that the links 31 will cause the diagonal braces 33 to swing downwardly and rearwardly for drawing downwardly on the rear portion of the seat 26. At the same time, the rearward movement of the uprights 17 will cause the links 35 to be swung rearwardly on their pivots 36. As the level of the upper ends of the uprights 17 remain substantially constant, this will cause the diagonal braces 25 to be swung upwardly and rearwardly for elevating the forward edge of the seat 26 as the rear edge thereof is depressed and as said seat is swung rearwardly relatively to the frame structures 7.

From the foregoing it will be readily apparent that a forward and rearward swinging motion of the hanger frames 12 will thus impart a forward and swinging movement to the seat 26 and also a forward and rearward rocking motion, as previously described and as illustrated in Figures 1, 4 and 5. Conversely, the swinging movement of the seat 26 will cause a swinging movement of the hanger frames 12 and accordingly a rocking movement of the seat; or, a rocking movement of the seat will be transmitted to the hanger frames 12 for imparting a swinging motion thereto for also causing the seat 26 to be swung forwardly and rearwardly as it is rocked.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. In a combination swing rocker mounting for seat structures, a pair of laterally spaced upright supporting frames, a pair of hanger frames swingably supported between said supporting frames for swinging movement in directions lengthwise thereof, brace members pivotally mounted at their lower ends on end portions of the hanger frames, at different distances from the connections of the hanger frames to the supporting frames and extending upwardly therefrom in cross relationship, link means pivotally connected

to portions of the hanger frames and to the brace members supported thereby in spaced relationship to the pivots of the brace members, links pivotally connected to certain of the brace members, and a seat or platform pivotally supported at its corners by said links and by the other brace members whereby swinging movement of the hanger frames relatively to the supporting frames will impart a swinging and rocking movement to the seat or platform through said cross-brace members.

2. A structure as in claim 1, spaced uprights pivotally supported by the lower portions of said hanger frames and extending upwardly therefrom and to the upper ends of which said link means are connected.

3. A combination swing and rocker mounting for seat structures comprising a substantially U-shaped hanger frame, a supporting structure for swingably mounting said hanger frame for movement in directions substantially parallel thereto, braces pivotally connected to the hanger frame and extending upwardly therefrom in cross relationship, a seat or platform pivotally connected adjacent one end thereof to the upper end of one of said braces, a link pivotally connected to and depending from the other end of said seat or platform and having its lower end pivotally connected to the upper end of the other brace, a pair of uprights pivotally connected to the intermediate, lower portion of said hanger frame and extending upwardly therefrom, and links connecting the upper ends of said uprights to said brace members adjacent their last mentioned, upper ends.

4. A structure as in claim 3, said braces being connected to the hanger frame at different distances from the connection of the hanger frame to the supporting structure whereby swinging movement of the hanger frame on the supporting structure will impart a swinging and rocking movement to the seat or platform.

5. A structure as in claim 3, said supporting structure being substantially arch-shaped and said hanger frame being swingably suspended from the upper end thereof.

6. A structure as in claim 3, said hanger frame being formed of pivotally connected sections.

7. A structure as in claim 3, said hanger frame being formed of pivotally connected sections, and said braces being pivotally connected to a substantially upright side portion of the hanger frame.

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