

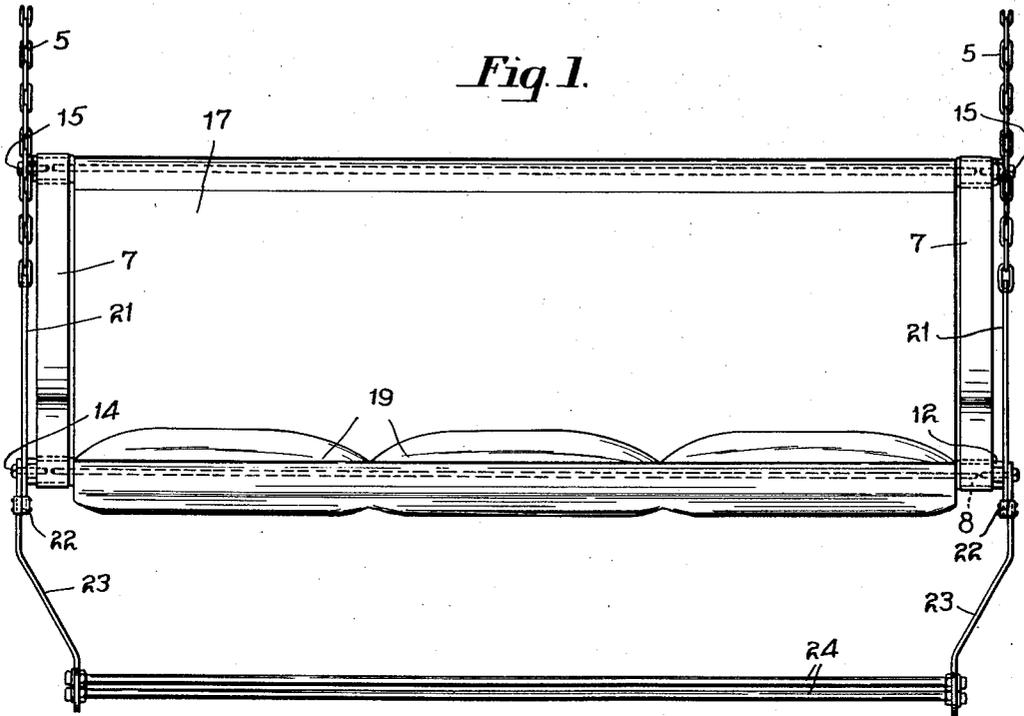
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W. R. McGOWEN

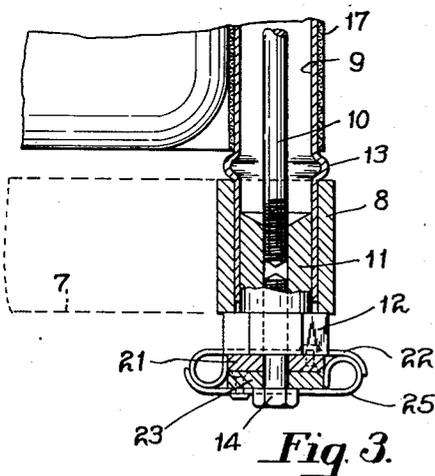
1,944,446

SWING

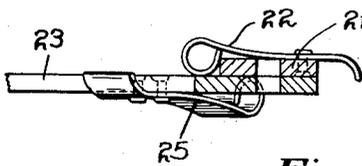
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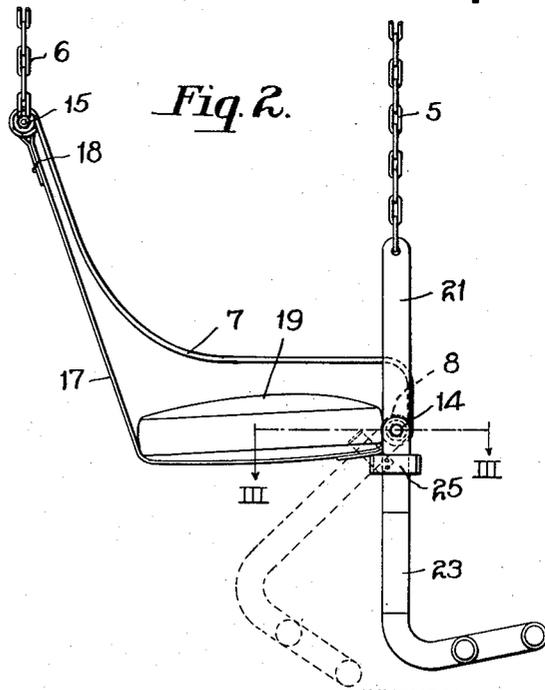
*Fig. 1.*



*Fig. 3.*



*Fig. 4.*



*Fig. 2.*

INVENTOR

*William R. McGowen,  
By Archworth Martin,  
Attorney.*

# UNITED STATES PATENT OFFICE

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SWING

William R. McGowen, Pittsburgh, Pa., assignor to  
The McKay Company, Pittsburgh, Pa., a cor-  
poration of Pennsylvania

Application May 27, 1932. Serial No. 613,839

4 Claims. (Cl. 155—65)

My invention relates more particularly to swings of the type which are provided with flexible supporting members such as chains, ropes, or the like, but certain features thereof are applicable  
5 also to other types of seats such as chairs, etc.

One object of my invention is to provide a swing structure embodying operating levers which may be conveniently operated by the feet of the user.

10 Another object of my invention is to provide means for retaining the lever-operated member or members in retracted position beneath the swing.

In the accompanying drawing, Figure 1 is a  
15 face view of a swing embodying my invention; Fig. 2 is an end view thereof; Fig. 3 is an enlarged sectional view taken on the line III--III of Fig. 2, and Fig. 4 is a view showing a portion of the structure of Fig. 3, with the operating lever  
20 in retracted position.

The swing is shown as supported at its front side by a pair of chains 5, and at its rear side by a pair of chains 6, the chains being connected at their upper ends to suitable supports such as  
25 a porch ceiling, an overhead frame or the like, in any well-known manner. A bar 7 is provided at each end of the swing, and these bars constitute a portion of the framework.

These bars may be suitably of spring steel and  
30 are curled at their lower ends to form eyes 8. The ends of a tubular cross bar 9 extend into the eyes 8 and a tie rod 10 is disposed within each end of the tube 9, and has threaded engagement with the bar 9. At each side of the swing a nut 11 is dis-  
35 posed within the adjacent end of the tie rod 10, so that when the nut is screwed up its head at 12 will force the eye 8 against a bead or rib 13 formed on the bar 9, thereby securely connecting the side bars 7 together at their lower ends.

40 A screw 14 is threaded into each nut 11 and protrudes from the head 12 of the nut for a purpose to be hereinafter described.

At their upper rear ends, the side bars 7 are curled to form eyes corresponding to the eyes  
45 8, such ends being connected by means of a tubular bar, a tie rod, and nuts corresponding to the bar 9, tie rod 10 and nuts 11 at the lower ends of the side bars. Screws 15 are threaded into the nuts at the upper ends of the bars 7 in a manner  
50 similar to that in which the screws 14 at the lower ends are mounted. The protruding portions of the screws 15 serve as a means for connecting the rear chains 6 to the swing.

55 A strip 17 of canvas, leather, or other suitable material, has its ends looped around the upper

and lower tubular cross bars, and fastened to the body of the strip, by sewing or otherwise, as indicated at 18, and seat cushions 19 may be conveniently placed on the strip. The parts thus far described may be of a structural arrangement  
60 similar to that shown in my copending application, Serial No. 605,659, filed April 16, 1932.

A hanger bar 21 is connected at its upper end to each of the front chains 5, and the shank of one of the screws 14 extends through one of  
65 the hanger bars near the lower end of such bar to pivotally connect the bar to the swing frame. A spring-like clip member 22 is secured to the inner side of each hanger bar 21, below the pivotal connection 14.  
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At each end of the swing, an operating lever 23 is pivotally supported by one of the screws 14, these levers being of approximately L-shape, as shown more clearly in Fig. 2. The lower front ends of the levers 23 are connected by foot rails  
75 24 that may be fastened thereto in any suitable manner, as for example, in the same manner as the side bars 7 are connected.

Against the outer side of each lever 23, I rivet a spring 25. When the levers 23 and the foot rails 24 are in their operative positions as shown  
80 in Figs. 1 to 3, the looped forward end of the spring clip 25 seats within the curved forward end of the spring 22, and the looped rear end of the spring 25 seats within the curved rear end of the spring 22, as shown more clearly in Fig. 3. A person seated in the swing may then exert foot pressure forwardly on the rails 24, tending to  
85 rock the operating levers 23. Since the interconnecting arrangement of the springs 22—25 limit forward pivotal movement of the levers 23 relative to the hanger bars 21, the hanger bars 21 will be rocked about their pivots 14, thus shifting the center of gravity of the swing and imparting a swaying or swinging movement thereto.  
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When a person leaves the swing, the lower ends of the levers 23 and the foot rails carried thereby, can be readily swung to the retracted position shown by dotted lines in Fig. 2. In  
95 such position, the foot rails are beneath the swing and out of the way of a person either leaving the swing or approaching the same, the foot rails being readily operated by the heels of the user to bring them into operative position, or to  
100 push them out of the way.

The foot rails will not accidentally swing to the full line position of Fig. 2 because the center of gravity of such rails and the levers 23 when in such position is forwardly of the pivotal supports 14, and further because of the friction  
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exerted by the curled ends of the springs 22 and 25 on the sides of the levers 23, and the hanger bars 21, respectively.

If a user leaves the swing while it is moving, and without first pushing the foot rail back, the impact of the foot rails against the person's legs or heels, will simply result in pushing the foot rails to the retracted position shown in Fig. 2, without injuring the user.

It will be understood that the foot rest may be employed in connection with a floor-supported seat such as a chair or a bench, as distinguished from a swing. With some types of chairs it is desired to employ a foot or leg rest for the greater ease of the user. Many of these foot and leg rests protrude to such an extent that they serve as obstructions to persons using the chair, and make it difficult for a person to enter and leave the chair. With a foot or leg rest pivotally connected to a seat as shown in my application, it can be readily moved to and from projected position.

I claim as my invention:—

1. Swing structure comprising a seat frame, suspending members for the front and rear sides of the frame, a hanger bar connected at one of its ends to a suspending member and pivotally connected to the frame, an operating lever pivotally connected to the frame and movably connected to the said bar, and a stop device limiting movement of said lever in one direction relative to the bar, including yieldable means for resisting movement of the lever in the opposite direction.

2. Swing structure comprising a seat frame, suspending members for the front and rear sides of the frame, a hanger bar connected at one of its ends to a suspending member and pivotally connected to the frame, an operating lever connected to the frame and having pivotal move-

ment relative thereto, a foot rest carried by the lower end of said lever, and means connecting the lever to the bar and limiting forward movement of the lower end of the operating lever relative to the hanger bar, including a frictional device for holding the said lever at predetermined positions with respect to the said bar.

3. Swing structure comprising a seat frame, suspending members for the front and rear sides of the frame, a hanger bar at each end of the forward side of the frame, the upper ends of the hanger bars being connected to the front suspending members, and intermediate portions thereof being pivotally connected to the frame, operating levers each pivotally connected at their upper ends to the front side of the frame, a foot rail connected to the lower ends of the operating levers, friction spring devices at the lower ends of the hanger bars and engaging intermediate portions of the said levers for yieldably resisting relative movement of the levers and the hanger bars, and stop members limiting forward swinging movement of the said levers relative to the hanger bars.

4. Swing structure comprising a seat frame, suspending members for the front and rear sides of the frame, a hanger bar connected at one of its ends to a suspending member and extending upwardly from the forward edge of the frame, an operating lever extending below the frame, means pivotally interconnecting the said frame, said hanger bar and said lever for relative pivotal movement the one with respect to the others, and stop means limiting forward movement of the lever relative to said bar, including a yieldable frictional device for releasibly holding the said lever at either of predetermined positions with respect to the said bar.

WILLIAM R. MCGOWEN.

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