

(No Model.)

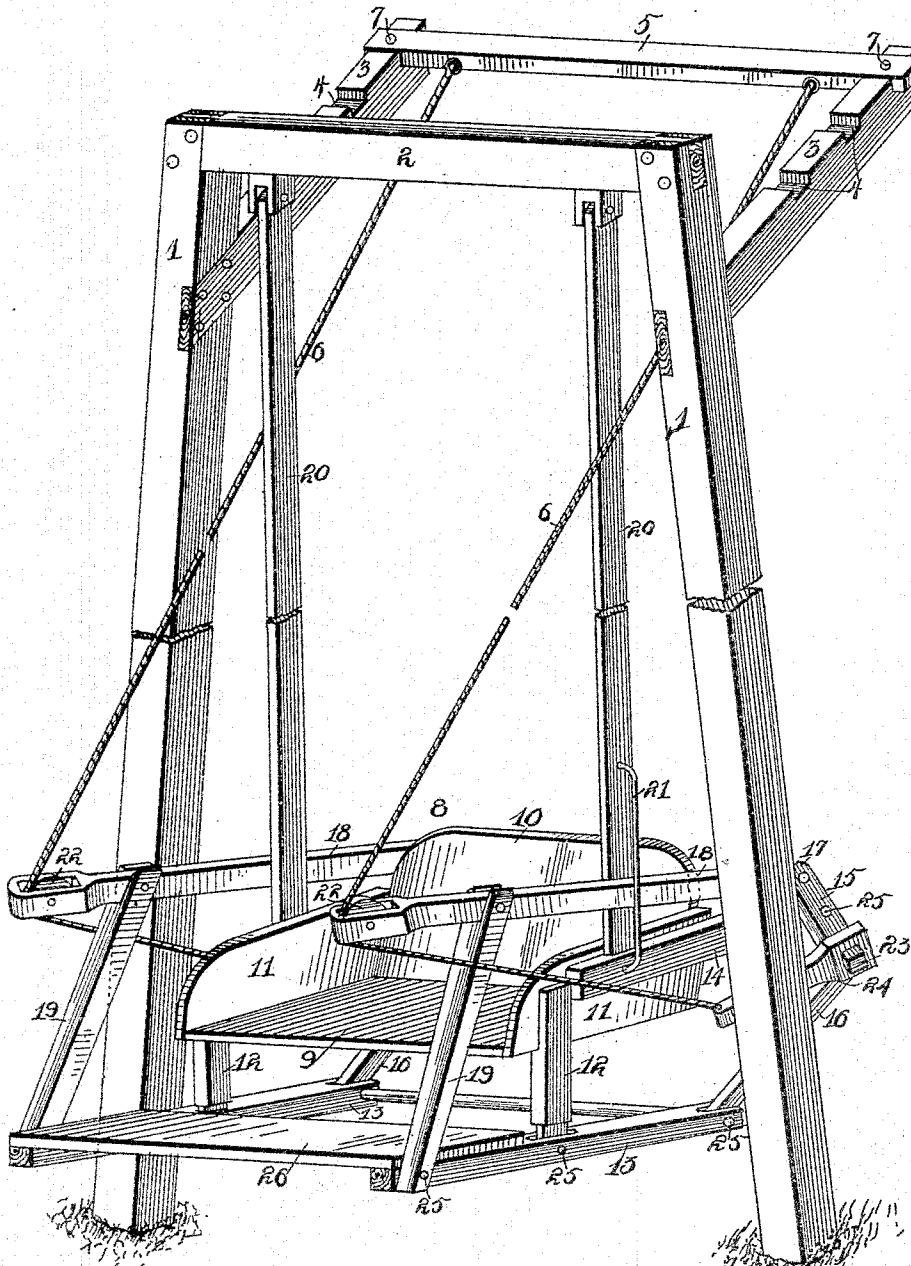
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J. W. SHIPMAN.  
SWING.

No. 491,379.

Patented Feb. 7, 1893.

Fig. 1



Witnesses  
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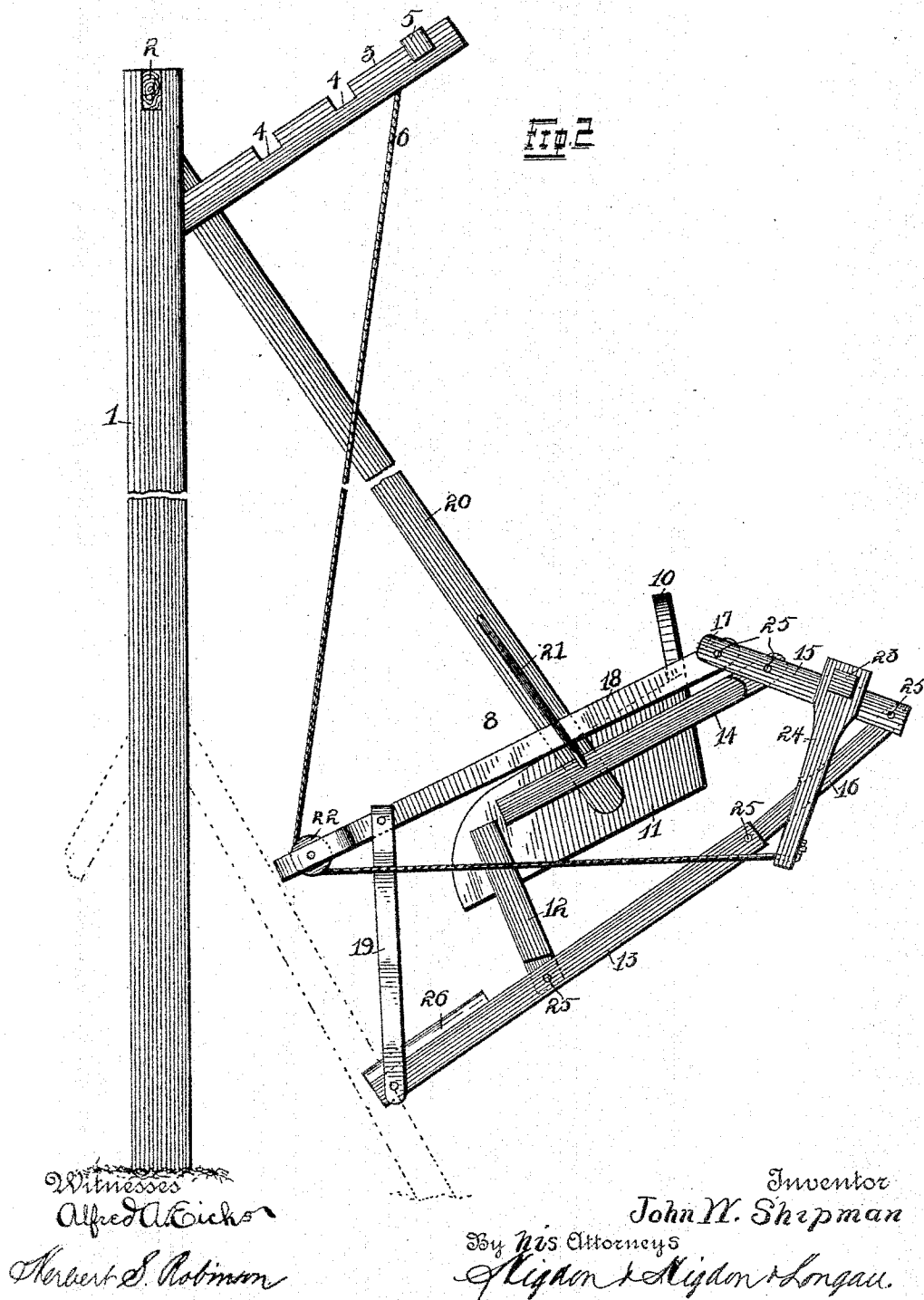
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# UNITED STATES PATENT OFFICE.

JOHN W. SHIPMAN, OF KIRKWOOD, MISSOURI, ASSIGNOR OF ONE-HALF TO  
EDWARD J. WEBER, OF SAME PLACE.

## SWING.

SPECIFICATION forming part of Letters Patent No. 491,379, dated February 7, 1893.

Application filed June 4, 1892. Serial No. 435,526. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. SHIPMAN, of Kirkwood, St. Louis county, and State of Missouri, have invented certain new and useful Improvements in Swings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "swings" and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and designated in the claim.

In the drawings: Figure 1, is a perspective view of my complete invention. Fig. 2, is the side elevation of my invention showing the different parts in detail.

The object of my invention is to construct an improved swing, having a novel combination of levers by means of which an oscillating motion is imparted to the seat, and this movement to be controlled at will by the feet of the person occupying the seat.

Referring to the drawings: 1 indicates two upright supporting posts connected across the top by a horizontal piece 2, fastened to said upright posts in any secure and mechanical manner. Mortised in and projecting at an angle from said upright posts 1, and near the cross piece 2 are extending beams 3, in the upper side of which are notches 4 adapted to engage the cross piece 5 from which the ropes 6 depend. In this construction I prefer to provide the extending beam 3 with a number of notches such as 4 so that the swing may be adjusted either higher or lower without necessitating a change in the length of the rope. Said cross piece 5 is removably secured in said notches 4 by means of pins 7 or some similar manner of fastenings.

8 represents the body of the swing, consisting of a seat 9, a back 10 for said seat and two end pieces 11 secured to said seat. Secured to the ends 11 of said seat, and projecting downward therefrom are pieces 12. These pieces are secured near the front of said seat and have pivotally secured on their lower or free ends cross levers 13, the joint being made at a point near the center of said levers 13. Also secured to said ends 11, and projecting backward therefrom in a horizontal direction

with the seat are pieces 14, said pieces having pivotally secured on their free ends levers 15. Said levers 13 have pivotally secured to their rear ends auxiliary levers 16, to the free ends of which are secured the aforesaid levers 15. The levers 15 are secured to the stationary horizontal pieces 14 at a suitable distance below the ends, opposite to those which are secured to the auxiliary levers 16. To the end 17 of said levers 15 are pivoted horizontal levers 18. Said levers 18 have depending from a point near the ends, opposite those to which the levers 15 are attached, auxiliary levers 19 connecting said levers 18 with the bottom cross levers 13.

The body of the swing is hung in a depending position by means of upright supporting pieces 20 which are pivotally secured in a suitable manner to the cross piece 2. The levers 13 move up and down, when the swing is in motion and the limit of the movement of said levers is confined by guards 21. Between the levers 19 at a point where they are secured to the levers 18, and the ends of said levers 18, are secured in a suitable and mechanical manner, small pulley wheels 22 over which the ropes 6 are adapted to pass. Connecting the two sets of levers, located on each side of the seat, and back of said seat is a cross piece 23 which is permanently secured to the levers 15. The ends of said cross piece 23 project beyond the said levers 13, and have secured on said projecting ends balancing levers 24 to the free ends of which are secured the ends of the rope 6. These ropes pass around said pulleys 22 and upward to the cross piece 5, where they are secured in any suitable and mechanical manner. The respective sets of levers are fastened together and adapted to work simultaneously by the connecting rods 25 running under and behind the seat and connecting said levers.

I desire to state that in the construction of my improved swing the levers used on each side of the seat are exact counterparts of each other and that the notches in the extending beam 3 exactly coincide with each other in position.

Connecting the front ends of the levers 13, and suitably secured thereto is a foot board 26, by means of which the swing is operated.

Having fully described the construction of my invention, I will now proceed to describe its operation. The swing when not in use is in a normal position as shown in Fig. 1. The  
5 limit of its backward movement is shown in Fig. 2 with the levers in their relative positions. Taking the swing in its normal position, and a person seated in the swing with the feet upon the foot board. By pressing  
10 down said foot board 26, the levers 19 connected with the cross levers 13 upon which the foot board 26 is secured, pulls down the lever 18, thus diverging the levers 15 and 16 and forcing the lever 24 backward thus contracting the rope which passes over the pulley and imparting to the swing a swaying motion. In the forward movement of the swing the foot-board is in an opposite, relative position to that in which it is shown in Fig. 2,  
15 and consequently the levers are also in an opposite direction. Thus it will be seen by the movement of the foot-board operated by the person seated in the swing, that the whole mechanism is operated directly by this means.  
25 Having fully described my invention, what I claim is,

As an improvement in swings, the combination, with the frame, the seat and supports therefor, of downwardly projecting pieces 12, cross levers 13 pivoted thereto, rearwardly-  
30 projecting pieces 14 located at the sides of the seat, levers 15 pivoted to the free ends of the latter, levers 16 pivotally connecting the levers 13 and 15, horizontal levers 18 pivoted to the upper ends of the levers 15 and provided at their forward ends with pulleys 22,  
35 levers 19 connecting the levers 13 and 18, a cross piece 23 rigidly secured to the levers 15, levers 24 projecting forwardly from the ends of the piece 23, ropes 6 secured to said levers 24, passing over the pulleys 22 and connected at their free upper ends with the frame, and a foot-board 26 connecting the forward ends of the levers 13 and adapted for operating the swing; substantially as and for the purpose  
40 set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. SHIPMAN.

Witnesses:

HERBERT S. ROBINSON,  
ALFRED A. EICKS.