(No Model.)

J. H. NICHOLSON.

SWING.

No. 479,524. Patented July 26, 1892.

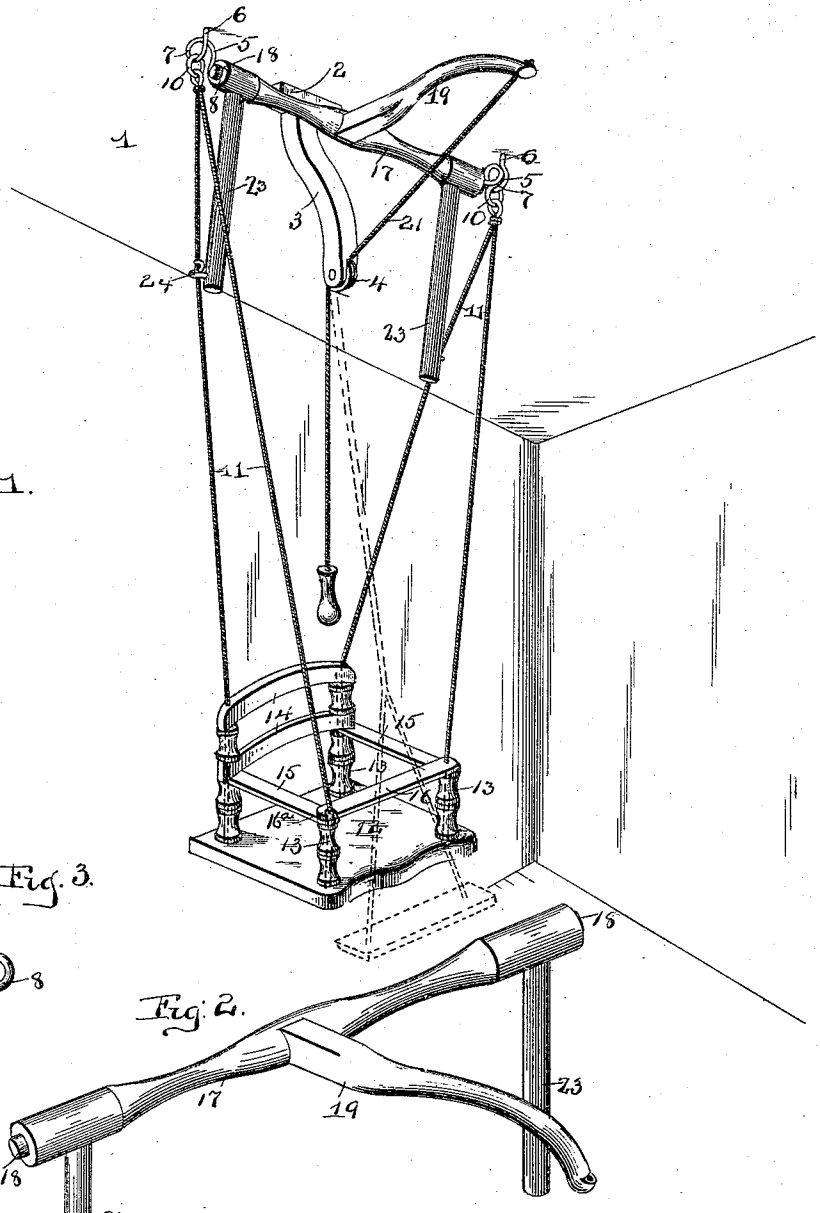

Fig. 1.

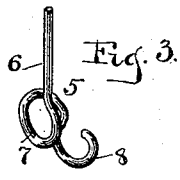

Fig. 3.

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

JACOB H. NICHOLSON, OF ROANOKE, VIRGINIA, ASSIGNOR TO THE ROANOKE WOOD NOVELTY COMPANY, OF SAME PLACE.

SWING.

SPECIFICATION forming part of Letters Patent No. 479,524, dated July 26, 1892.

Application filed August 15, 1891. Serial No. 402,738. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. NICHOLSON, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented a new and useful Swing, of which the following is a specification.

This invention relates to improvements in swings, and to that class thereof adapted to be operated by the person within the swing.

The objects of my invention are to provide a swing of very simple construction, adapted to be easily operated by the person therein, and to be suspended removably indoors from a ceiling, doorway, or other place, or outdoors, if desired, from a porch or other convenient point.

Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a swing constructed in accordance with my invention. Fig. 2 is a detail in perspective of the rocking shaft. Fig. 3 is a detail in perspective of one of the shaft-supporting hooks.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the ceiling of a porch, room, or other suitable support, and to the same is secured a securing-plate 2, in any suitable manner, as by screws, and from the center of said plate there depends a compoundly-curved arm 3, rigid with the plate and having its lower end bifurcated, and a pulley provided with a grooved periphery loosely journaled in the bifurcation. At opposite sides of the securing-plate 2 there is secured to the ceiling 1 a pair of hooks 5. These hooks consist of the shank 6, beyond which said hook is coiled to form an eye 7, and beyond the eyes depend and are bent to form bearing-eyes 8. Rings 10 are mounted in the eyes 7, and from the same depend supporting-ropes 11, a pair being located in each ring and the latter being removably mounted in the eyes, as will be apparent.

Any form of seat may be employed that may be found desirable, and in the present instance I have illustrated one especially adapted for children. 12 designates the seat proper, which is rectangular in plan, and from the four corners of the same rise bored standards 13, the rear pair being connected by cross-bars 14, which form a back. The cross-bars are perforated opposite the bores of the standards, and through the bores and perforations of the standards and bars are passed the lower ends of the two rear ropes. The front bored standards are connected to the rear standards by arm-rests 15, which are also perforated for the passage of the ropes, and through the front ends of the arm-rests and the standards and seat pass the front pair of ropes, said ropes being knotted or otherwise secured under the seat. A safety-bar 16 may be loosely connected with one of the front ropes and notched at 16^a, whereby it is removably connected with the opposite rope, and when the bar is in position the child is prevented from accidentally falling from the swing.

17 designates a rock-shaft, the ends of which are reduced to form bearing-trunnions 18, which trunnions removably take into the bearing-eyes 8 of the hooks. The rock-shaft is provided at its center with a forwardly-disposed curved arm 19, having a perforation at its extremity, and through said perforation and knotted in front of the same is passed the propelling-rope 21, the free end of the rope being passed over the grooved pulley 4, which is directly in rear of the central rock-arm, and, depending below the pulley, terminates in a hand-pull 22 over the seat, within reach of the occupant. Near its ends the rock-shaft is provided with side rock-arms 23, which depend from the rock-shaft, and are disposed at a right angle therefrom and also at a right angle to the central rock-arm. The extremities of the side rock-arms are provided with outwardly-disposed coiled eyes 24, which eyes removably engage with the rear pair of ropes.

This completes the construction, and the operation is as follows: The occupant of the swing or, if it be a child, an attendant draws upon the hand-pull of the propelling-rope, and through the medium of the latter rotates the rock-shaft in its bearings, which causes

the opposite side rock-arms to swing to the rear and with them the ropes with which they are connected. After giving a pull of this kind the propelling-rope is slackened and the swing moves forward, and upon its return movement is again actuated by the propelling-rope, and so on until a momentum has been secured, and this may be readily maintained by occasional slight pulls as the swing moves to the rear.

It will be obvious that, as shown by dotted lines in Fig. 1, the propelling-rope may be made longer and below the seat provided with a foot-rest, whereby the swing may be operated by the feet of the operator.

It will be seen from the foregoing description, taken in connection with the accompanying drawings, that I provide a swing adapted to be operated by the occupant, said swing being of great simplicity and capable of being cheaply manufactured and sold. Furthermore, it will be obvious that by removing the rock-shaft from the bearings and disconnecting the rock-arms from the ropes and the rings from the hooks the entire apparatus may be compactly stored out of the way when not in use and may be readily set up when desired.

Having described my invention, what I claim is—

1. In a swing of the class described, the combination, with the depending standard secured to a ceiling and provided with a pulley, the hooks arranged at opposite sides of the standard, rings removably mounted in the hooks, and ropes depending from the rings and connected with the seat, of a rock-shaft removably mounted in bearings at the inner sides of the hooks, a central rock-arm extending forwardly from the shaft, a propelling-rope connected to the end of the rock-arm and passing rearwardly over the pulley of the standard, from which latter it depends, and opposite rock-arms depending from the ends of the rock-shaft and removably connected with opposite seat-suspension ropes, substantially as specified.

2. In a swing of the class described, the combination, with the securing-plate connected with the ceiling and having the depending bifurcated standard provided with a grooved pulley, the opposite hooks arranged at equidistant sides of the standard and consisting of the shank portions, the coiled hooks beyond the same and terminating in the bearing-eyes, the rings mounted in the hooks, the opposite pairs of ropes depending from the rings, and the seat supported at the lower end of the ropes, of the transverse rock-shaft terminating in bearings removably mounted in the bearing-eyes of the hooks, the centrally-located and forwardly-disposed rock-arm projecting from the shaft, the propelling-rope connected to the front end of the arm, passed rearwardly over and depending from the grooved pulley, and terminating in a pull, the opposite rock-arms depending from the rock-shaft near the ends thereof and disposed at a right angle to the central rock-arm, and the coiled hooks extending from the lower ends of the end rock-arms and removably engaging with the rear ropes, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JACOB H. NICHOLSON.

Witnesses:
H. M. DARNALL,
S. S. WALLACE.