No. 848,214. PATENTED MAR. 26, 1907.

A. M. STARR.

SWING POWER TRANSMISSION.

APPLICATION FILED MAY 24, 1905.

Fig. 1.

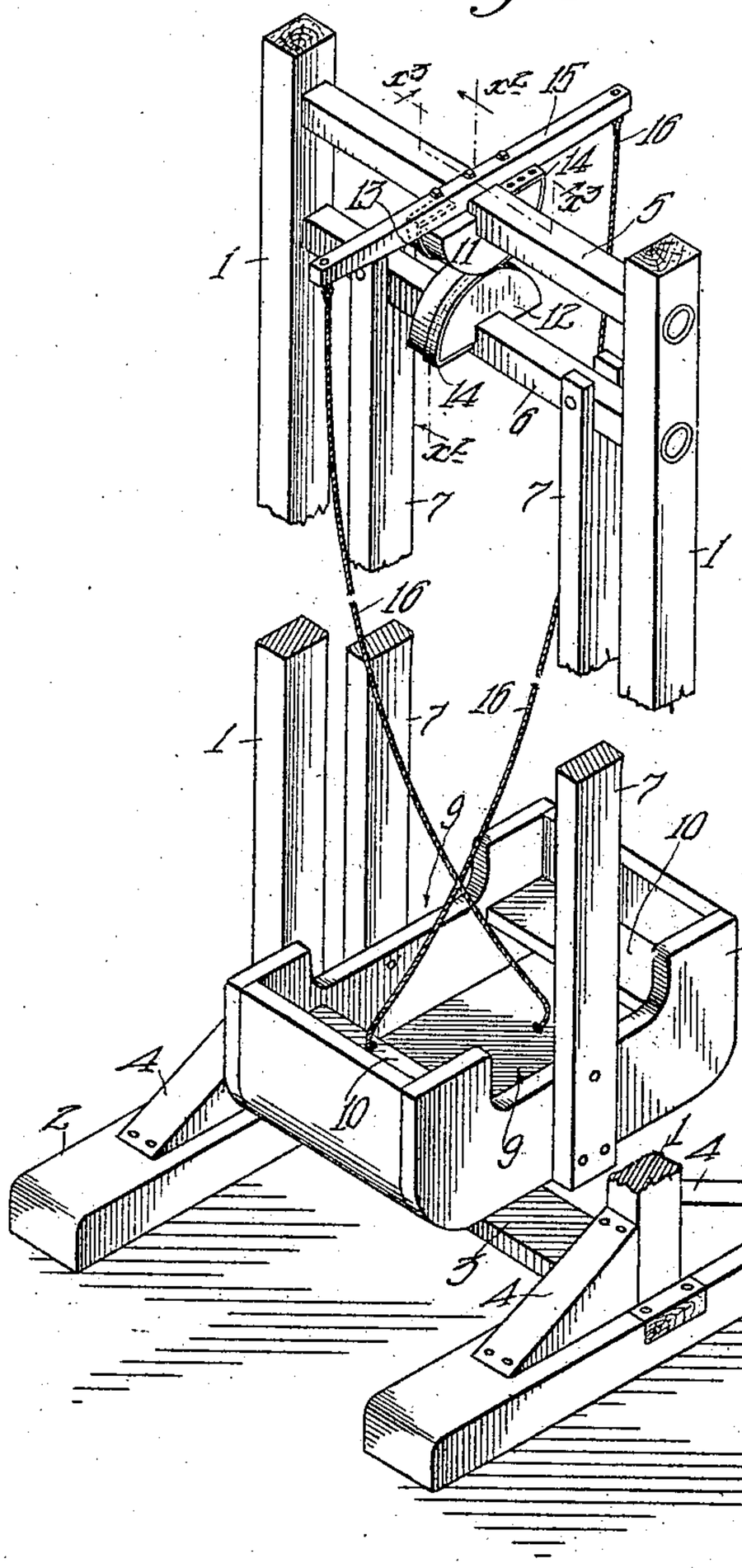


Fig. 2.

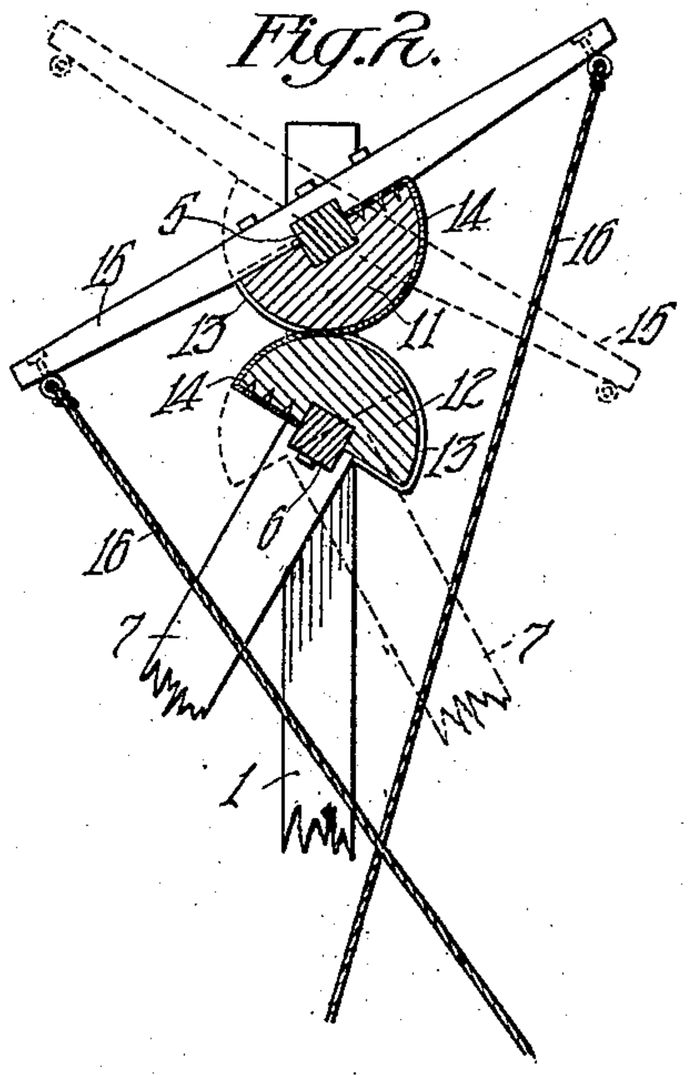
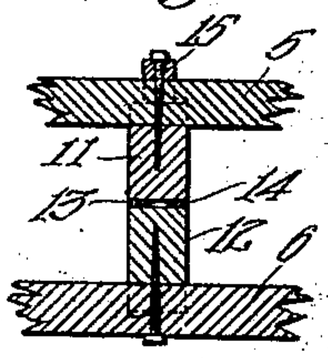


Fig. 3.



Witnesses:-
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George T. Hackley

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Andrew M. Starr:
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his Attys

UNITED STATES PATENT OFFICE.

ANDREW M. STARR, OF HOLLYWOOD, CALIFORNIA.

SWING POWER TRANSMISSION.

No. 848,214. Specification of Letters Patent. Patented March 26, 1907.

Application filed May 24, 1905. Serial No. 262,019.

To all whom it may concern:

Be it known that I, ANDREW M. STARR, a citizen of the United States, residing at Hollywood, in the county of Los Angeles and State of California, have invented a new and useful Swing Power Transmission, of which the following is a specification.

This invention relates to swings adapted to be operated by the occupant of the swing.

It is of the objects of the invention to provide a superior simple noiseless line-operated swing that the occupant can operate with maximum ease by pulling on a line while seated in the swing and in which the force exerted by the occupant to operate the swing is applied in a direct manner to move the swing in a direction toward the line on which the pull is exerted.

The accompanying drawings illustrate the invention.

Figure 1 is a broken perspective view of a swing in which this invention is applied. Fig. 2 is a fragmental section on line indicated by x^2 x^2, Fig. 1. Fig. 3 is a fragmental transverse vertical section on line indicated by x^3 x^3, Fig. 1.

11 and 12 designate two members of equal radii pivoted on parallel axes, as shafts 5 6, respectively, and provided with juxtaposed circular faces 21 22. 15 designates means, in the form of a lever or walking-beam, for transmitting power to one of said members 11. 7 designates means in the form of hangers for transmitting power from the other member 12. 13 14 designate two flexible connections extending between said faces 21 22 and connecting said members 11 12, the corresponding ends of said connections being fastened to the opposite members, respectively—that is to say, the ends of connections 13 14 at the left in Figs. 1 and 2 are fastened to the members 11 12, respectively, and the ends of said connections 13 14 at the right of said views are fastened to the members 12 11, respectively, one end of the connection 13 being fastened to the left portion of the member 11 and to the right portion of the member 12, while the ends of the connection 14 are fastened to the right of the member 11 and to the left of the member 12. When power is applied to the walking-beam 15 to rock the member 11 and its shaft 5, the power will be transmitted, through one or the other of the flexible connections 13 14, to swing the hanger 7.

8 designates a swing-carriage fastened to the pair of hangers 7, which are rigidly connected with the lower shaft 6.

16 designates lines attached to the walking-beam 15 at the opposite ends thereof, leading thence to the swing-carriage 8. 9 and 10 designate the sides and seats of said carriage. The lines 16 are designed in the form shown to be used by the occupant of the carriage to produce a swinging motion. A person sitting in the carriage and pulling on the line lightens his side of the swing, and thereby assists in moving the swing in the direction that the pull on the rope tends to move it. A person sitting on either seat of the swing can apply power through either line or rope 16 to operate the swing. The power is applied directly to the swing through the power-transmission means and the hanger.

In the drawings the shafts 5 6 are shown journaled in uprights 1, having feet 2, connected by a cross-bar 3, braced by corner-blocks 4; but I do not limit the invention to the particular construction shown.

The swing may be operated by means of either one or both of the lines, and the lines when operated by two persons may be crossed, as indicated in the drawings, or they may extend directly down from the walking-beam.

The carriage 8 in operation may describe long arcs, while the persons sitting in the carriage may easily retain their hold upon the ropes, as the relative movement between the ropes and the carriage is comparatively slight.

Any form of support may be used, and the members 11 12 may be in the form of semicircular disks attached to the shafts, respectively, the disks being in the same plane. The connections may be any form of flexible straps connected to opposite corners of the disks, the straps 13 being attached to the upper edge of the disk 11 and following the curved face and crossing over to meet the curved face of the disk 12, following thence around said curved face of disk 12 and being attached to the opposite edge thereof, which is diagonally opposite the other end of the strap 13, the strap 14 being attached to the lower corner of the disk 12 and following the curved face thereof and crossing over to the rear curved face of the disk 11 and being attached to that corner of the disk 11 which is diagonally opposite the other end of the strap 14. The disks 11 and

12 are thus connected in such a manner that when one of them is turned on its axis the other will be turned in a reverse direction on its axis by the flexible connections 13 and 14, power being transmitted in one direction by the strap 13 and in the other direction by the strap 14.

The walking-beam and the hangers are rigidly fastened to the shafts 5 and 6, respectively, and the straps or flexible connections are drawn taut, so that there is no slack or lost motion.

The disk 11 is mounted with its flat side up, and the walking-beam 15 extends thereacross, said beam and disk fitting against each other and being notched to receive shaft 5 therebetween.

What I claim is—

1. In a swing a carriage, rigid hanger means fixed thereto and pivoted to swing, a member in fixed relation to said hanger means and pivoted coaxially therewith and provided with an upwardly-extending semicircular face, another pivoted member having a downwardly-extending semicircular face, in juxtaposition with said upwardly-extending semicircular face, a pair of flexible connections between said faces, connected to opposite sides of each member, a beam extending from the upper member, and a line fastened to and extending down from said arm within reach from the carriage.

2. A swing comprising a support, a pair of parallel shafts pivoted to the support, a semicircular disk attached to each shaft, the disks being in the same plane; a pair of flexible connections connected to opposite corners of the disks, a walking-beam carried by the upper shaft, a pair of hangers attached to the lower shaft, a carriage attached to the lower ends of the hangers, and a pair of lines attached to opposite ends of the walking-beam and extending down within reach from the carriage.

3. A swing comprising a support, a pair of upper and lower parallel shafts pivoted to said support, a carriage fixed to and suspended from the lower shaft, a disk attached to each shaft, the disks being in the same plane, a pair of flexible straps connected to opposite sides of each disk, a walking-beam carried by the upper shaft, the upper disk being semicircular, and said upper disk and walking-beam fitting against each other from opposite sides of said shaft, and a flexible connection attached to an end of the walking-beam and extending down within reach from the carriage.

In testimony whereof I have hereunto set my hand, at Los Angeles, California, this 18th day of May, 1905.

ANDREW M. STARR.

In presence of—
GEORGE T. HACKLEY,
FREDERICK S. LYON.