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CIRCLE SWING.

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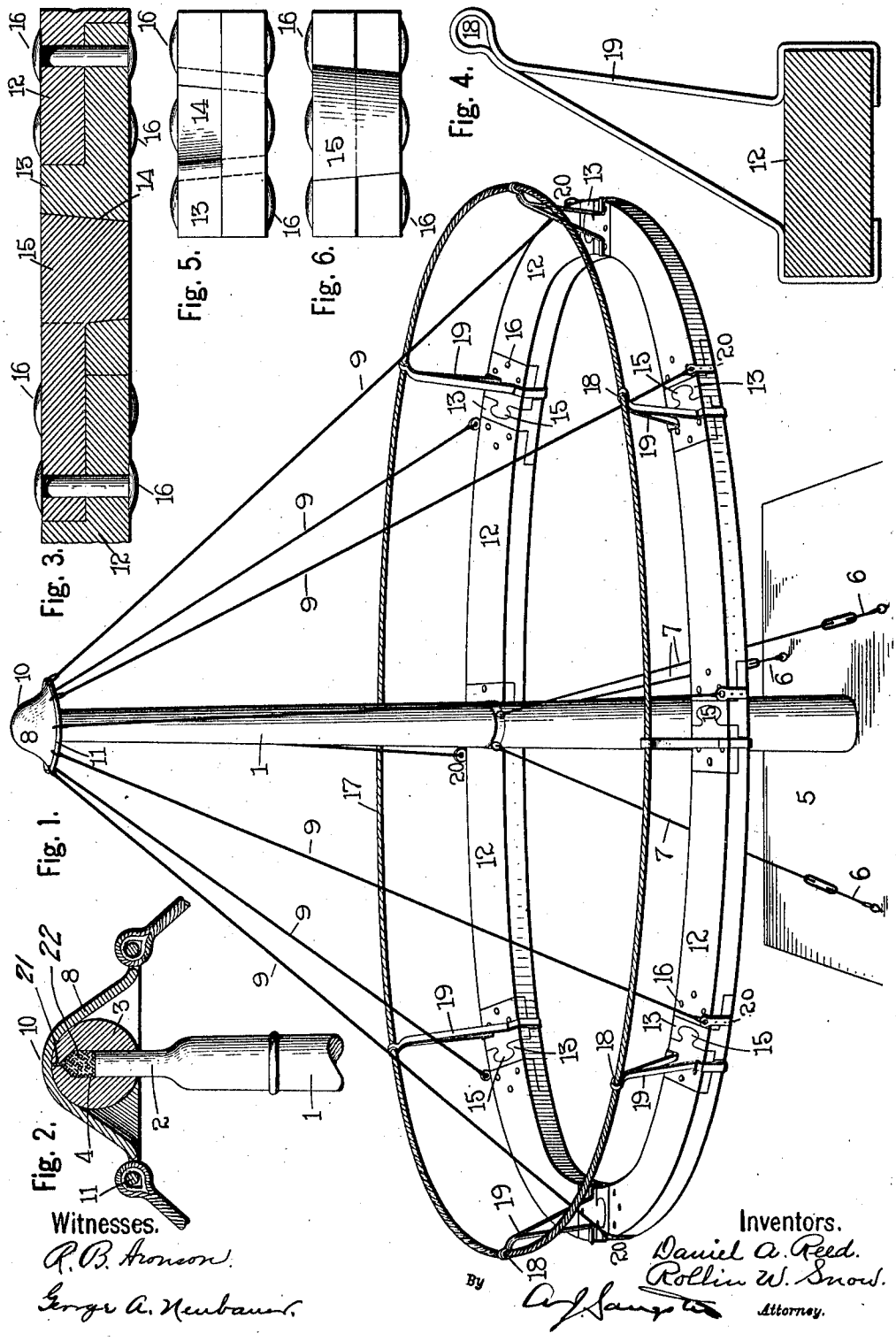

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CIRCLE-SWING.

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To all whom it may concern:

Be it known that we, DANIEL A. REED and ROLLIN W. SNOW, citizens of the United States, residing at Dunkirk, in the county of Chautauqua and State of New York, have invented a certain new and useful Improvement in Circle-Swings, of which the following is a specification.

This invention relates to improvements in circle swings, and the principal objects of the invention are to produce a comparatively simple, cheap and durable swing of this character, which can be quickly dismounted for compactness in storing or packing, and which when dismounted, may be easily and quickly set up or assembled in operating position by any ordinary person.

The invention also relates to certain details of construction which will be hereinafter described and claimed, reference being had to the accompanying drawings in which a preferred adaptation is shown.

Figure 1 is a perspective view of the improved circle swing set up in operating position. Fig. 2 is an enlarged fragmentary vertical central section through the top cap and the supporting ball, also showing in side elevation a fragment of the upper portions of the suspending cables and top end of the post. Fig. 3 is an enlarged fragmentary vertical section through one of the connecting joints between the segments of the circular ring. Fig. 4 is an enlarged detached side elevation of one of the supports for the back supporting rope, also showing a cross section through one of the segments of the circular ring to illustrate the manner of fastening the support to said segment. Fig. 5 is an end view of the socket end of one of the segments of the circular ring. Fig. 6 is an end view of the projection end of one of the segments of the circular ring.

In referring to the preferred construction of this improved circular swing shown in the accompanying drawings, like numerals designate like parts.

The type of this invention as illustrated consists of a center post having a ball arranged at its top end, a cap arranged on said ball so as to rock thereon, a circular ring suspended from the cap by a series of cables or other suitable elements, a base in which the lower end of the center post is supported, and a series of diagonal bracing cables extending from the base to the post. The ring is formed of a series of separable segments, and the base and the diagonal brace cables are detachable from the center post to permit the swing to be dismounted for compactness in packing or storing. The center post 1, is preferably constructed of wood, and is provided at its upper end with a metal top piece 2 which is fitted rigidly thereon. The metal top piece is formed with its outer surface of even size throughout, for a purpose to be hereinafter described.

A ball 3 of suitable metal, is provided with a socket 4 in which the top metal piece of the post is snugly but slidably fitted. The lower end of the center post is fitted in a socket in a base 5, and is maintained in upright position in said base by means of braces which extend diagonally from the base up to the post above its lower end. The preferable construction of these diagonal braces, is shown in the drawings, in which each consists of a lower wire cable member 6 attached at its lower end to the base, an upper wire cable member 7 attached at its upper end to the post, and a turn-buckle adjustably connecting the adjacent ends of the lower and upper wire cable members. A series of these diagonally extending cables are employed, which are attached at intervals to the post around the circumference thereof, and extend diagonally downward and outward and fasten at their lower ends to the base at a distance from the socket in which the lower end of the center post is fitted.

The swing proper comprises a metal cap 8 which is of dished form, having a curved inner surface adapted to fit upon the exterior surface of the ball; a lower circular ring, and a series of cables 9, which extend from the top cap to the circular ring, and thus suspend the circular ring from said top cap. The top cap is almost conical in form, the exception being that it has a rounded apex 10, and a slightly outwardly flaring flange 11 at its lower edge. The inner wall of the rounded apex 10 is curved to about the curvature of the exterior surface of the ball, as shown in Fig. 2, and the cap is adapted to rock freely on said ball when the swing is moved to and fro in operation.

The circular ring which constitutes or forms a supporting seat for the occupants of the swing is made fairly wide, and consists of a series of separable segments 12 detachably secured to each other by tapering

projections and sockets. Each of the segments is preferably formed of wood, and a metal socket element 13 is attached to one end of each segment and a metal projection element to the opposite end thereof. The metal socket element is provided with a tapering socket 14 in which a tapering projection 15 of an adjacent segment is adapted to fit. The socket elements and projecting elements are securely fastened to the wooden portions of the segments by means of rivets 16, or other suitable fasteners. The sockets of the socket elements and the projections of the projection elements are correspondingly tapered, so that they will wedge-lock when fitted together, and thus secure the segments of the circular supporting ring firmly and unyieldingly to each other.

A support is provided for the back of the occupants of the swing, which preferably consists of a rope 17, which is passed through the top eyes 18 of metal supports 19 attached at intervals to the segments of the circular ring. One of the metal supports 19 is preferably attached to each segment of the ring, having its lower end bent to fit on the edges of the segments, as shown. These metal supports may be fastened to the segments by the same rivets or fasteners which secure the metal socket and projection elements thereto.

To prevent friction, the contacting surfaces of the ball and the top cap require lubrication. One means for lubricating these movable parts is illustrated in Fig. 2 of the accompanying drawings, which consists in filling the socket 4 in the ball 3 with a suitable lubricant 22, and providing the ball with a small opening 21 through which the lubricant will be automatically forced by pressure when the swing is in operation. Preferably a hard grease is employed as lubricant and the upper portion 2 of the post is fitted in the socket 4 in the ball 3 close and snugly enough to prevent any perceptible side play of the ball or the post and also loose enough to permit the portion 2 to slide in the socket and press the lubricant out through the small vertical opening 21 and thereby force a thin film of the lubricant between the opposed curved surfaces of the ball and top cap.

In this improved structure the component parts may be easily and quickly assembled when in dismounted condition by any ordinary person, it only being necessary to fit the lower end of the center post in the socket in the base, fasten the diagonal brace cables in position and tighten them to rigidly brace the center post in an upright position, assemble the circular segmental ring by fitting the projections of the segments into the sockets of the adjacent segments, and then place the top cap in rocking position on the ball.

To dismount the swing when assembled, it is only necessary to remove the top cap from the ball, and disassociate or separate the segments of the circular ring and remove the center post from the base. The device may then be easily packed for transportation, or stored in any desired place.

This improved swing when in operating position may be oscillated from side to side by the operator, or may be rotated or revolved around the post.

It will be noted by referring to Fig. 1 that the supporting cables 9, used for suspending the segmental circular ring from the top metal cap, are equal in number to the segments of the ring, each cable being connected to one of the segments near the socket end thereof, so that when the segments of the ring are separated from each other they are still connected to the top cap by a cable, and thus cannot become lost or misplaced.

The object in connecting the cables to near the socket end is to support the segments against separation by the weight of an occupant of the circular ring. In the construction shown, the metal piece 20 is secured to each segment to which the lower end of one of the cables is suitably fastened.

The main advantages of this improved swing reside in its comparative simplicity and cheapness, the durable character of its structure, the fact that it can be easily operated by children and may be set up by, or dismounted by children without the aid of tools.

The structure of this improved swing may be modified or changed, and some of the elements thereof may be arranged in different locations or altogether omitted, within the scope of the following claims.

We claim—

1. In a device of the class described, a center post, and a supporting ring rockably suspended around said post; said supporting ring being composed of a series of separable segments wedge locked together at their ends.

2. In a device of the class described, a center post, and a supporting ring rockably suspended around said post; said supporting ring being composed of a series of separable segments, and each segment having a socket at one end and a projection at the opposite end, and the projections of the segments being adapted to seat in the sockets of the adjacent segments.

3. In a device of the class described, a center post, a supporting ring rockably suspended around said post, said supporting ring being composed of a series of separable segments and each segment having a tapering socket at one end and a correspondingly tapering projection at the opposite end, and the tapering projections of the segments being tapered to seat in the tapering sockets of the adjacent segments.

4. In a device of the class described, a center post, and a supporting ring rockably suspended around said post; said supporting ring being composed of a series of separable segments having interlocking sockets and projections.

5. In a device of the class described, a center post, and a supporting ring rockably suspended around said post and composed of a series of segments and means for detachably locking said segments together at their ends.

6. In a device of the class described, a center post having a top ball, a cap rockably fitted on the ball, a lower supporting ring around the post, said supporting ring being composed of a series of separable segments, and a series of cables suspending said ring from the cap, each cable being attached to one of the segments of the supporting ring.

7. In a device of the class described, a center post, a supporting ring rockably suspended around said post, said supporting ring being composed of a series of separable segments, and a back supporting element consisting of supports extending upward at intervals from the supporting rings, each of said supports being attached to one of the segments of said ring, and a back supporting rope attached to said supports.

8. In a device of the class described, a center post, a ball having a socket containing lubricant in which the upper end of the post snugly but slidably fits, said ball having a small outlet for the lubricant, and a swing having a top cap rockably mounted on the ball.

9. In a device of the class described, a center post having a top ball, a cap rockably fitted on the ball, a lower ring suspended from said cap, and means for automatically introducing lubricant between the opposed surfaces of the ball and cap.

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