W. S. TOTHILL.

MERRY-GO-ROUND.

APPLICATION FILED FEB. 12, 1912.

1,073,449.

Patented Sept. 16, 1913.

3 SHEETS—SHEET 1.

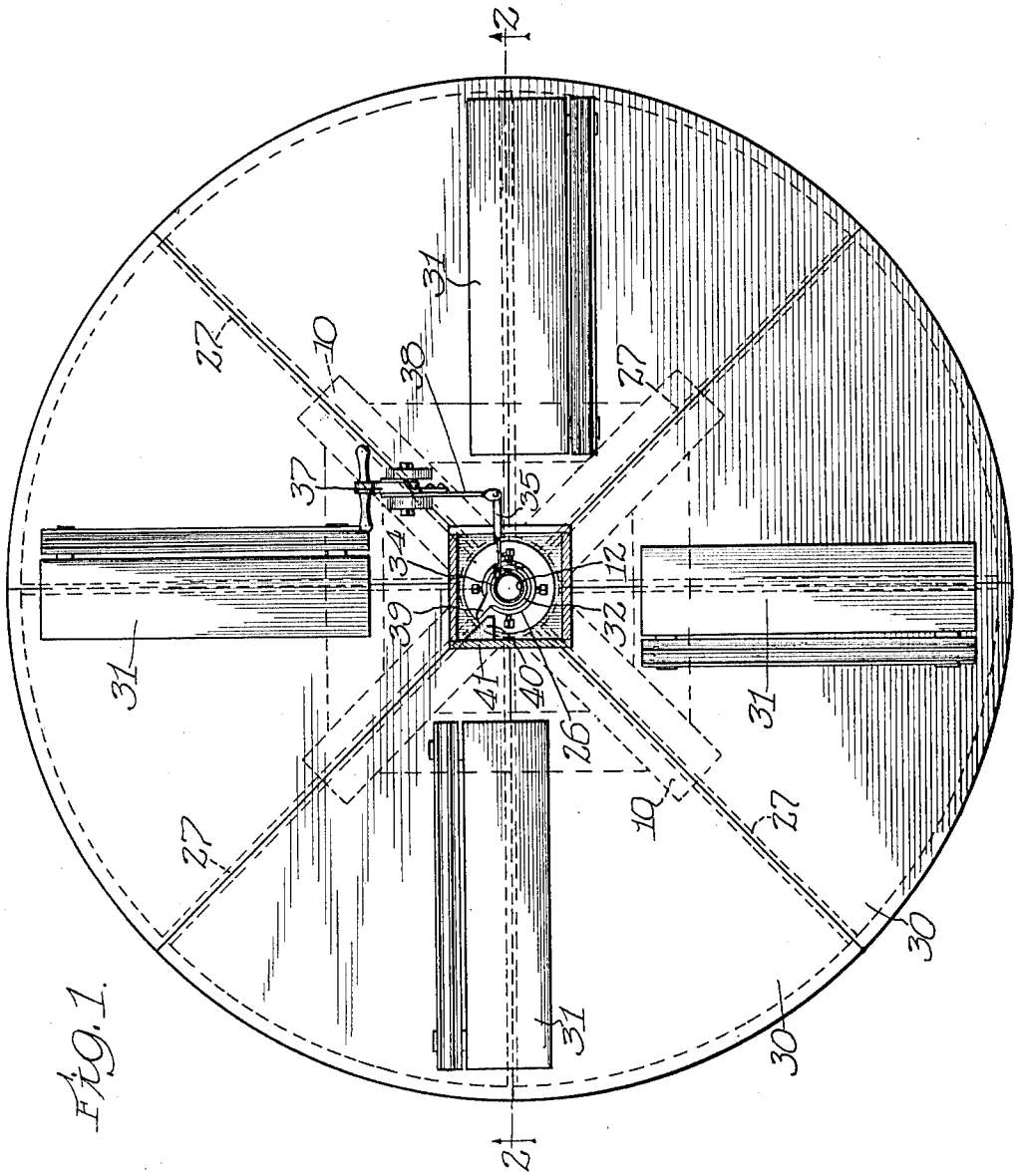

Fig. 1.

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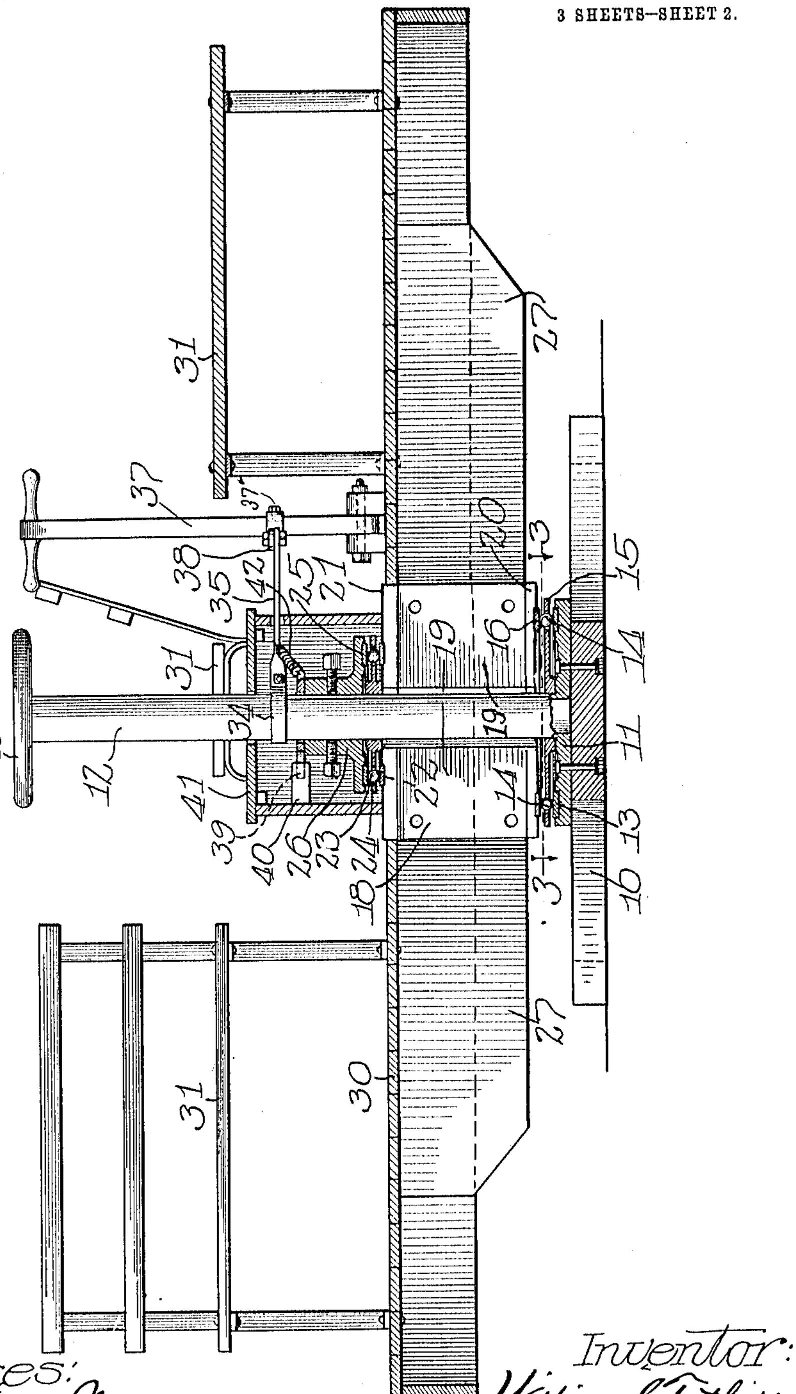
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 5.

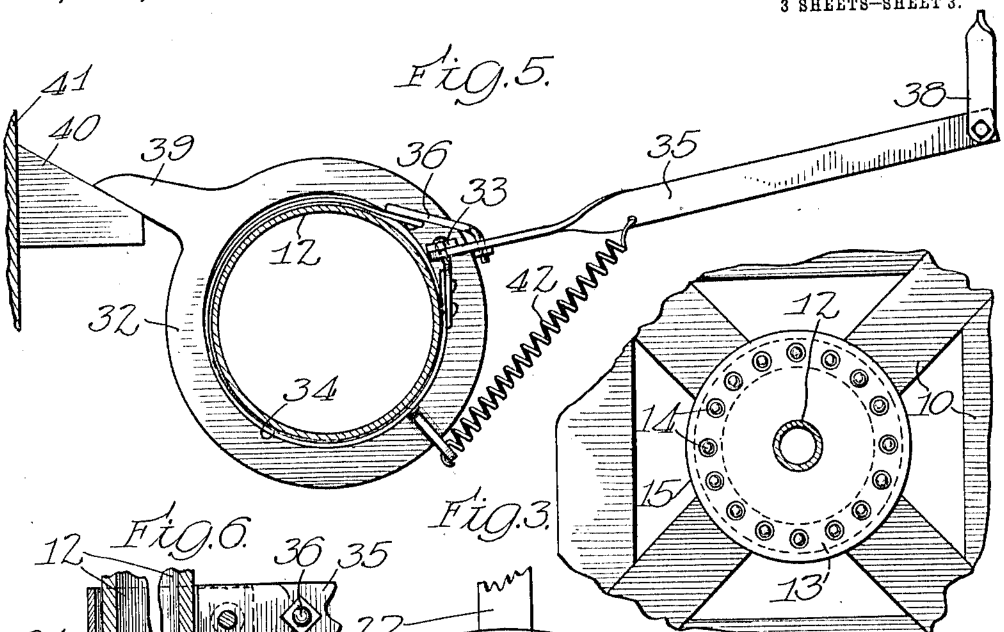


Fig. 6.

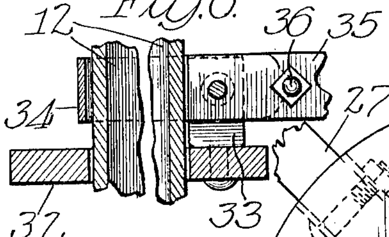


Fig. 4.

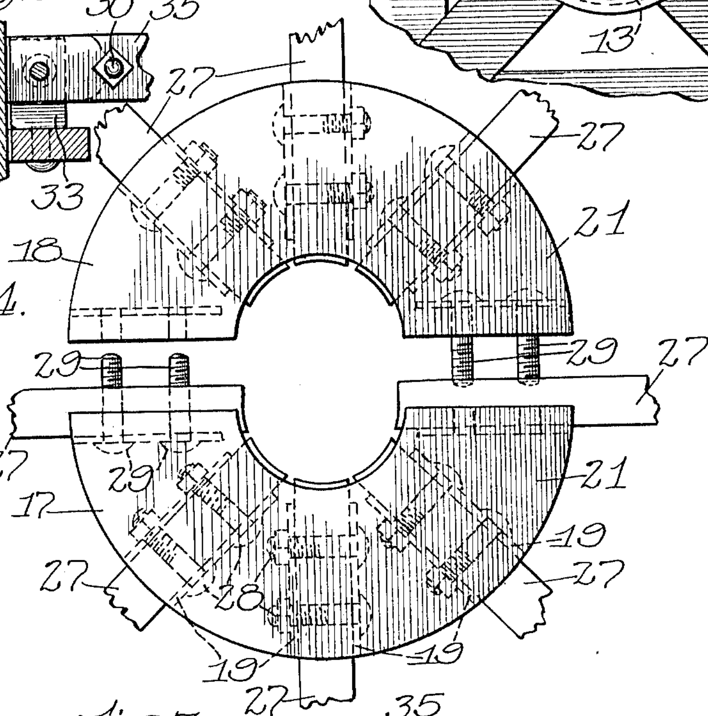
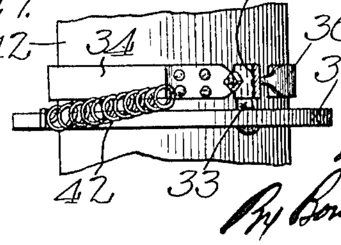


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM S. TOTHILL, OF CHICAGO, ILLINOIS.

MERRY-GO-ROUND.

1,073,449. Specification of Letters Patent. Patented Sept. 16, 1913.

Original application filed September 2, 1909, Serial No. 515,886. Divided and this application filed February 12, 1912. Serial No. 677,007.

To all whom it may concern:

Be it known that I, WILLIAM S. TOTHILL, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Merry-Go-Rounds, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to amusement devices of the type commonly known as merry-go-rounds, and it has for its object the production of a device of this type which may be easily revolved by those upon it. I have found that by reason of my construction a great number of children can safely use one of these devices, the platform being easily rotatable with even thirty or forty or fifty boys and girls upon it. The bearing of the radial beams of the platform upon the central metal post, with two series of balls one to resist upward pressure and the other to resist the downward pressure, makes a very good bearing, one which will wear for years, and one which will withstand a very great amount of the hardest kind of usage. A bearing having these characteristics is shown in my application for Letters Patent of the United States for improvements in circle bars, Ser. No. 515,886, filed on September 2, 1909, the claims in such application which covered a "roundabout" structure having been divided out. This present application is filed to cover certain of the subject-matter divided out of said application, Ser. No. 515,886, together with certain other improvements hereinafter specifically set forth.

The drawings show a form of construction embodying my improvements, the same being specifically described herein.

That which I believe to be new is set forth in the claims.

In the drawings, Figure 1 is a top view of my improved device, with the upper end of the bearing post and the box built thereabout cut away the better to show the construction. Fig. 2 is a cross section taken on line 2—2 of Fig. 1. Fig. 3 is an enlarged detail, being a section taken on line 3—3 of Fig. 2. Fig. 4 is an enlarged detail, being a top view of the two sections of the casting by which the platform beams are secured in position. Fig. 5 is an enlarged detail, showing the clutch mechanism for revolving the platform, with the collar to which one end of the clutch-band is attached held in turned position so as to loosen the band. Fig. 6 is an enlarged detail, partly broken away, showing the manner of attaching the clutch-band to the collar. Fig. 7 is an enlarged detail, showing a side view, partly in section, of the parts shown in Fig. 5.

Referring to the several figures of the drawings, in which corresponding parts are indicated by like reference characters, 10 indicates a base of any appropriate type, to which is attached a heavy plate 11, rising from which is a heavy metal pipe or post 12, in the construction shown being formed integral therewith.

13 indicates a ring, preferably made of steel or other durable metal, suitably secured to said plate 11, serving as a bearing for a series of balls 14 spaced apart by a ring 15 suitably supported a short distance above said ring 13.

16 indicates a ring similar to the ring 13 but located above the balls 14.

17—18 indicate the two sections of a heavy spider comprising a plurality of radially-disposed plates 19 spaced in pairs about the entire circumference thereof, the plates of each section being held in position relative to each other by means of heavy arc-shaped plates 20—21, the former of which is supported by the ring 16.

22 indicates a ring similar to the ring 13 secured in position upon the plates 21 of the two sections 17 and 18, upon which plate 22 are located a series of balls 23 spaced apart by a ball-ring 24 suitably supported a short distance above the ring 22. 25 indicates another ring similar to the ring 22 in position upon the balls 23.

26 indicates a heavy collar resting upon the ring 25 and secured by means of set screws or in any other suitable manner upon the post 12.

27 indicates a plurality of heavy wooden beams secured in position between the plates 19 with their inner ends butting against the post 12 and spacing the spider 17—18 away from said post. If preferred, bolts 28 may be used for securing the beams 27 in position between the plates 19, and in any event bolts 29 are used to secure together the two sections 17 and 18.

30 indicates a floor supported by the beams 27. It will be understood that in building the device, one section of the floor may be secured to the beams 27 carried by the section 17 of the spider and the other

half section secured to the beams 27 carried by the section 18 of the spider, the sections being left separate for shipment, the ends of the flooring boards of the section 18 being secured to the appropriate beams 27 of the section 17 when the two sections are assembled and secured together by the bolts 29.

31 indicates seats of any suitable type secured in position upon the floor or platform.

32 indicates a collar loosely mounted on the post 12 and resting upon the heavy collar 26.

33 indicates a small plate secured at its lower end to the collar 32.

34 indicates a band passing around the post 12, one end of which passes through a suitable opening in the end of an arm 35 and is secured to said plate 33. The opposite end of said band is secured to said arm 35 at a point a short distance farther out from the post 12, this connection being by means of a screw-threaded plate 36 secured to the end of the band 34. As will be readily understood, when the arm 35 is given a slight movement to the right (as seen in Fig. 5 looking from the right), the band 34 is loosened upon the post 12, but when the arm is given a movement in the opposite direction the band is drawn tight upon said post.

37 indicates a lever pivotally mounted upon the platform and adapted to be moved toward and from the post 12, though not in a direct line therewith.

38 indicates a link pivotally connected at one end to the outer end of the arm 35 and pivotally connected at the other end to the lever 37 by means of a pivot-bolt 37^a. It will be understood that when the lever is given a stroke toward the post 12, the first result will be a tightening of the band 34 upon the said post. After the said band is drawn tight so as to prevent its slipping around the post, the further movement of the lever toward the post serves to move the lower end of the lever relative to the post upon the pivot-bolt 37^a as a fulcrum, causing the platform to revolve in a counter-clockwise direction. When the end of the stroke of the lever toward the post 12 is reached, the first movement of the lever away from the post serves to loosen the band 34, rendering the pivot-bolt 37^a freely movable, and leaving the lever free to move to the end of its stroke, when it is again in position for the operative stroke.

39 indicates a lug on the collar 32, extending outward therefrom into close proximity with a block 40 carried by the housing 41 which is suitably secured upon the platform of the device. Whenever the platform is by any means given a slight rotation in a clockwise direction, this block 40 is brought into contact with the lug 39, swinging the collar 32 slightly upon the plate 33 as a pivot, as shown in Fig. 5, against the action of the spring 42 which is connected at one end to the collar 32 and at the other end to the arm 35. This swinging of the collar 32 upon the pivot-plate 33 tends to draw the inner end of the band 34 in a clockwise direction about the post 12. This has the effect of loosening the band 34 from the post 12, leaving the platform free to be rotated in a clockwise direction. The spring 42 normally serves to hold the band 34 drawn tight about the post 12.

43 indicates a hand-wheel fixed upon the upper end of the post 12 in position to be grasped by one or more boys or girls for the purpose of drawing themselves and with them the platform about the post 12. I have found in practice that this hand-wheel is a very acceptable means for revolving the platform, and by the use of both the lever and the hand-wheel the platform may be revolved very rapidly.

By reason of the comparatively small size of the wheel 43, it can be grasped in such a manner that the platform may readily be given a half turn upon the post 12 before it is necessary to release the grasp for another effort. So far as I am aware, the use of such a wheel as this of a size to make possible its use in the manner described, is new, and I therefore claim it broadly.

What I claim as my invention and desire to secure by Letters Patent is—

1. The combination of a base, a post rising therefrom, and a frame comprising a plurality of radially-extending wooden beams, and means for holding said beams in fixed position relative to each other, there being a metal bearing surface on the said post against which the inner ends of said beams abut and about which said beams are adapted to revolve, said beams by themselves constituting the bearing for said frame upon the metal bearing surface on said post.

2. The combination of a base, a metal post rising therefrom, and a frame comprising a plurality of radially-extending wooden beams abutting at their inner ends against said metal post and adapted to revolve thereabout, and means for holding said beams in fixed position relative to each other, said holding means being spaced away from said post by said beams.

3. The combination of a base, a post rising therefrom, and a frame revolubly mounted on said post, said frame comprising a spider having a plurality of radially-extending sockets and a plurality of wooden beams secured at their inner ends in said sockets and serving to space said spider away from said post, said post being provided with a metal bearing surface against

which said beams abut and about which they are adapted to revolve.

4. The combination of a base, a post rising therefrom, and a frame revolubly mounted on said post, said frame comprising a spider having a plurality of radially-extending sockets, and a plurality of wooden beams secured in said sockets with their inner ends extending slightly beyond the inner face of said spider, said beams serving to space said spider away from said post, said post being provided with a metal bearing surface against which said beams abut and about which they are adapted to revolve, said beams being comparatively thin compared with the circumference of the metal bearing surface on said post whereby each beam has a substantially square bearing on said post.

5. In a merry-go-round, the combination of a base, a platform revolubly mounted thereon, a clutch, means coöperating with said clutch for causing rotation of said platform relative to said base, said clutch normally permitting continuous rotation of said platform in only one direction, and means automatically actuated by the commencement of rotation in the reverse direction to throw said clutch out of operation whereby continuous rotation is permitted in such reverse direction.

6. In a merry-go-round, the combination of a base, a post rising therefrom, a platform revolubly mounted on said post, a clutch mounted on said post and adapted normally to revolve thereabout in one direction only, means coöperating with said clutch for causing said platform to revolve about said post in the same direction, and means actuated by a slight rotation of said platform in the reverse direction to release said clutch from said post to permit continuous rotation of said platform in said reverse direction about said post.

7. In a merry-go-round, the combination of a base, a post rising therefrom, a platform revolubly mounted on said post, a clutch mounted on said post, means connected with said clutch by the operation of which said clutch is held against rotation about said post in one direction and the platform is caused to rotate about said post in the opposite direction, and means actuated by a slight rotation of said platform in the first-named direction to release said clutch from said post.

8. In a merry-go-round, the combination of a base, a post rising therefrom, a platform revolubly mounted on said post, a lever pivotally mounted at one end on said platform, a clutch mounted on said post and adapted normally to revolve thereabout in one direction only, connections between said clutch and said lever at a point intermediate of its ends whereby the reciprocation of said lever causes said platform to revolve about said post in one direction, and means actuated by the commencement of rotation of said platform in the reverse direction to throw said clutch out of operation whereby continuous rotation of said clutch and said platform is permitted in said reverse direction.

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