

(No Model.)

2 Sheets—Sheet 1.

J. C. FOWLER.

ROUNDABOUT.

No. 451,373.

Patented Apr. 28, 1891.

Fig. 1.

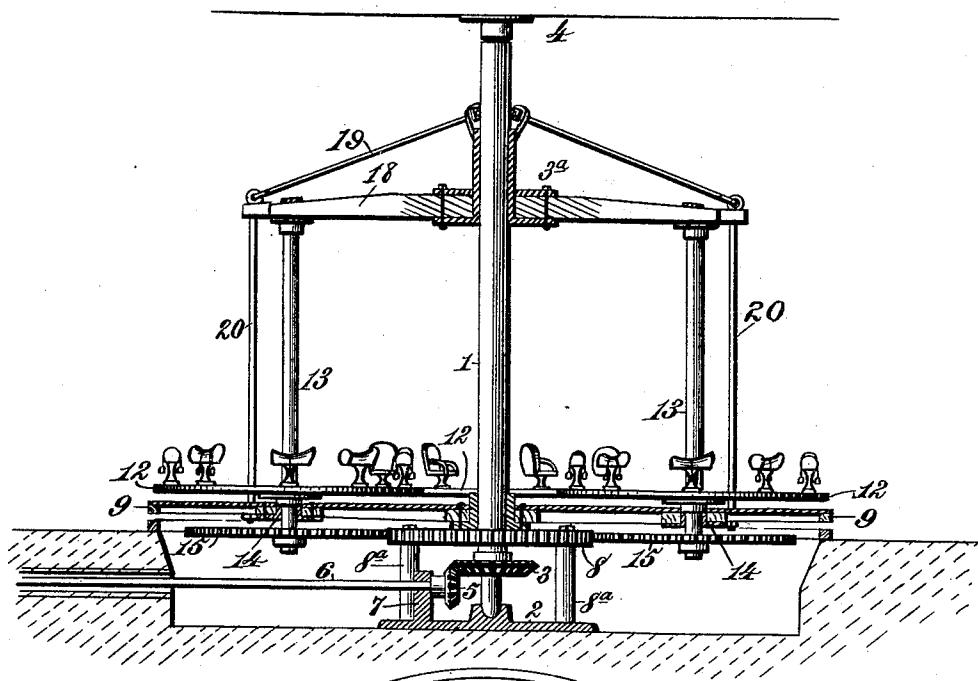
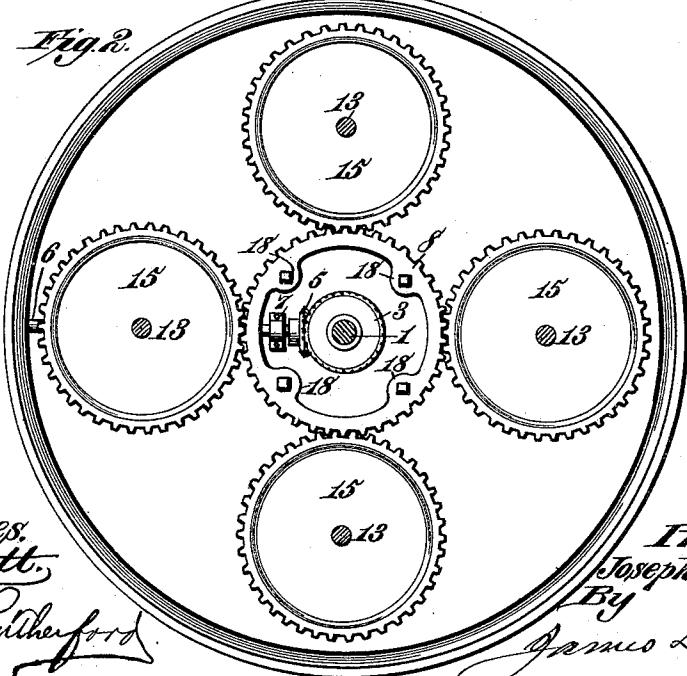


Fig. 2.



Witnesses.
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Fig. 3.

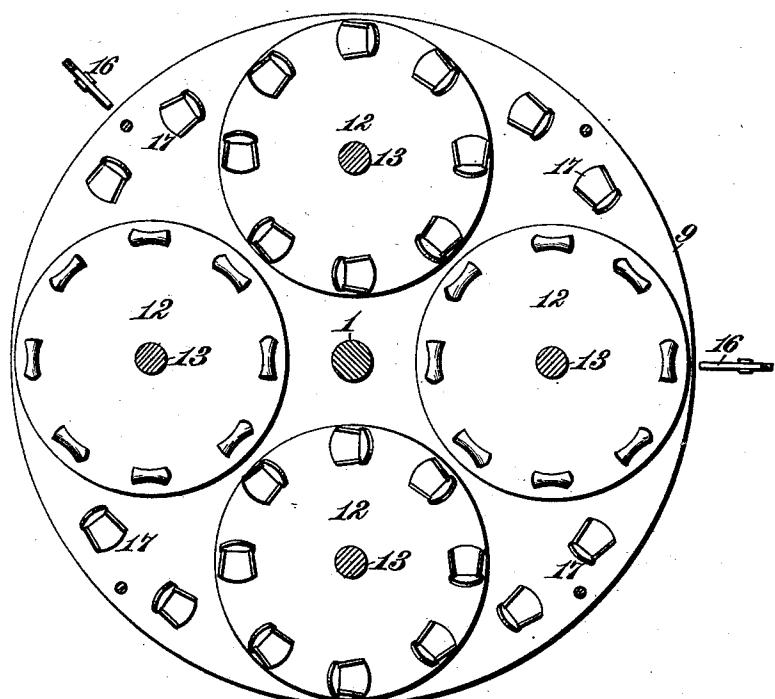
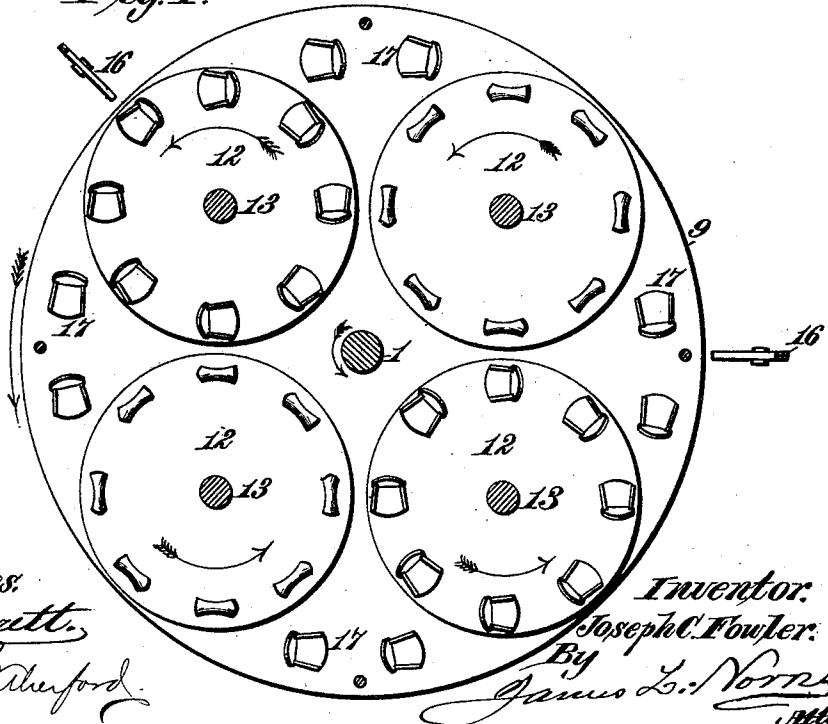


Fig. 4.



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Inventor:

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UNITED STATES PATENT OFFICE.

JOSEPH C. FOWLER, OF WASHINGTON, DISTRICT OF COLUMBIA.

ROUNABOUT.

SPECIFICATION forming part of Letters Patent No. 451,373, dated April 28, 1891.

Application filed September 22, 1890. Serial No. 365,817. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CHARLES FOWLER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Merry-Go-Rounds, of which the following is a specification.

My invention relates to that class of mechanical apparatus commonly known as "merry-go-rounds," and consisting of a circular bed, platform, or main support, of any suitable diameter, carried by a main central shaft stepped in a suitable bearing, said shaft being provided with a gear whereby rotary movement may be imparted. It is my purpose to mount upon said circular bed or support a series of pivotally-mounted platforms or auxiliary supports, each provided with seats or dummies having any suitable form and any preferred arrangement, each of the auxiliary platforms being supported by a shaft mounted upon the main platform and having gearing by which an independent rotation may be given to each of the auxiliary platforms in either direction, the main platform or stage being sustained against the weight of the auxiliary platforms and their loads in such manner that no rolling support is required beneath the outer portion of the main platform, thereby providing, substantially, a waltzing merry-go-round having a simple and comparatively cheap construction, possessing great strength, and turning upon a single central support or point.

My invention relates to these objects in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then definitely pointed out in the claim which follows this specification.

To enable others skilled in the art to make and use my said invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section showing my invention. Fig. 2 is a plan view of the gearing as shown in Fig. 1. Fig. 3 is a plan view of the main and auxiliary platforms, showing their relation to the ring-posts. Fig. 4 is a similar view showing the permutation of the chairs, seats, or other supports.

In the said drawings, the reference-numeral

1 designates the central shaft, which is stepped within a bearing 2 at its lower end. Upon this shaft, near its lower end, is mounted a miter-gear 3, and the shaft itself extends upward through the frame-work 3^a of the device and to the roofing 4 of the same. Meshing with said miter 3 is a miter-gear 5, mounted upon a horizontal shaft 6, resting in any suitable form of bearing 7 and driven by any suitable power. Around the vertical central shaft 1 is rigidly arranged upon suitable supports 8^a a gear-ring 8, preferably above the miter-gear 3. The connections and functions of this gear-ring will be shown hereinafter.

Upon the shaft 1 is mounted a main stage or platform 9, of any suitable diameter, and having upon the said platform one or more auxiliary platforms or stages 12, which are rigidly connected with shafts 13, revolving in suitable bearings 14 upon the main platform 9, each of the said auxiliary platforms 12 having its shaft provided with a gear 15, (shown in Fig. 2,) which meshes with and rolls upon the rigid gear-ring arranged around the shaft 1.

In the frame 3^a upon the central shaft 1 are inserted cross-heads 18, the ends of which overhang the peripheral portion of the main stage 9 and are supported by braces 19, connected from the central shaft. From the ends of the cross-heads 18 drop-rods 20 depend, their lower ends being connected to the platform 9 at a suitable point to sustain the load which may at any time be imposed upon the structure. This avoids the necessity of placing a rolling support beneath the outer portion of the platform, and thus greatly cheapens and simplifies the construction.

The gear-ring 8 is supported upon vertical standards 8^a, strongly mounted upon a sub-foundation, the gear-ring being provided with lugs 18, which receive bolts passing into the upper ends of the standards 8^a. The ring being therefore motionless, the gears 15 on the shafts of the auxiliary platforms or stages will roll upon the gear-ring as the main stage revolves, thereby imparting rotary movement to the auxiliary platforms. This motion may be relatively varied by altering the diameters of the gears 15 relatively to that of the gear-ring 8. It will readily be seen, therefore, that as the main platform revolves the auxiliary

platforms will receive a diminished or increased circular movement about the several auxiliary shafts. Thus does each chair, seat, or support upon each auxiliary platform have 5 revolution in the path of an epicycloid.

At one or more suitable points around the marginal portion of the main platform are arranged ring-troughs 16 on posts, from which the rider may, if successful, catch a ring at 10 each complete revolution. It should be noted, however, that inasmuch as the revolution of the auxiliary platforms is capable of an infinite variation or permutation the chances of success may be made so far problematical as 15 to greatly enhance the amusement afforded, as well as to infinitely increase the enjoyment derived. For example, the ring-posts being placed as shown in Figs. 3 and 4 and the shafts of the auxiliary platforms being so 20 geared as to cause each of said auxiliary platforms to revolve once while the main platform makes a complete revolution also, it will be evident that the chairs, seats, or supports numbered 1 in said figure will always 25 return to the same point at each revolution, and such point may be either exactly opposite the ring post or support or it may be located elsewhere. This arrangement would render it extremely easy to secure a ring each 30 time, since by watching the operation a few moments the rider could select the proper chair with absolute certainty. To vary this result, therefore, and give opportunity for competition in such selection, I may, by a 35 simple permutation of the gearing, cause the seats or other supports to arrive successively at the ring-posts; or I may produce an alternate coincidence of position or any other suc-

cession desired, and this succession may be differentiated upon each auxiliary platform, 40 or may be made alike upon two or more or upon all. On the other hand, the ring post or posts may be wholly omitted and the auxiliary platforms simply used to imitate the waltz movement. In both forms I may place 45 a number of seats or other supports 17 on the main stage or platform in the spaces between the auxiliary platforms.

What I claim is—

In a waltzing merry-go-round, the combination, with a main platform rigidly mounted upon and supported from a central vertical shaft which is rotated by suitable gearing, of auxiliary platforms mounted on shafts carried upon the main stage and having their 55 upper ends supported in the outer ends of cross-heads mounted on the upper portion of the central shaft and supported by braces, while the main platform is supported by drop-rods depending from the ends of the cross-heads, a gear-ring surrounding the central shaft below the main stage and rigidly mounted on standards, and a spur-gear rigidly mounted on each of the vertical shafts, carrying the auxiliary platforms and meshing with the 65 gear-ring, whereby the apparatus and all its parts may be supported upon a single central point and driven by positive gearing, substantially as described.

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

JOSEPH C. FOWLER.

Witnesses:

JAMES L. NORRIS,

JAMES A. RUTHERFORD.