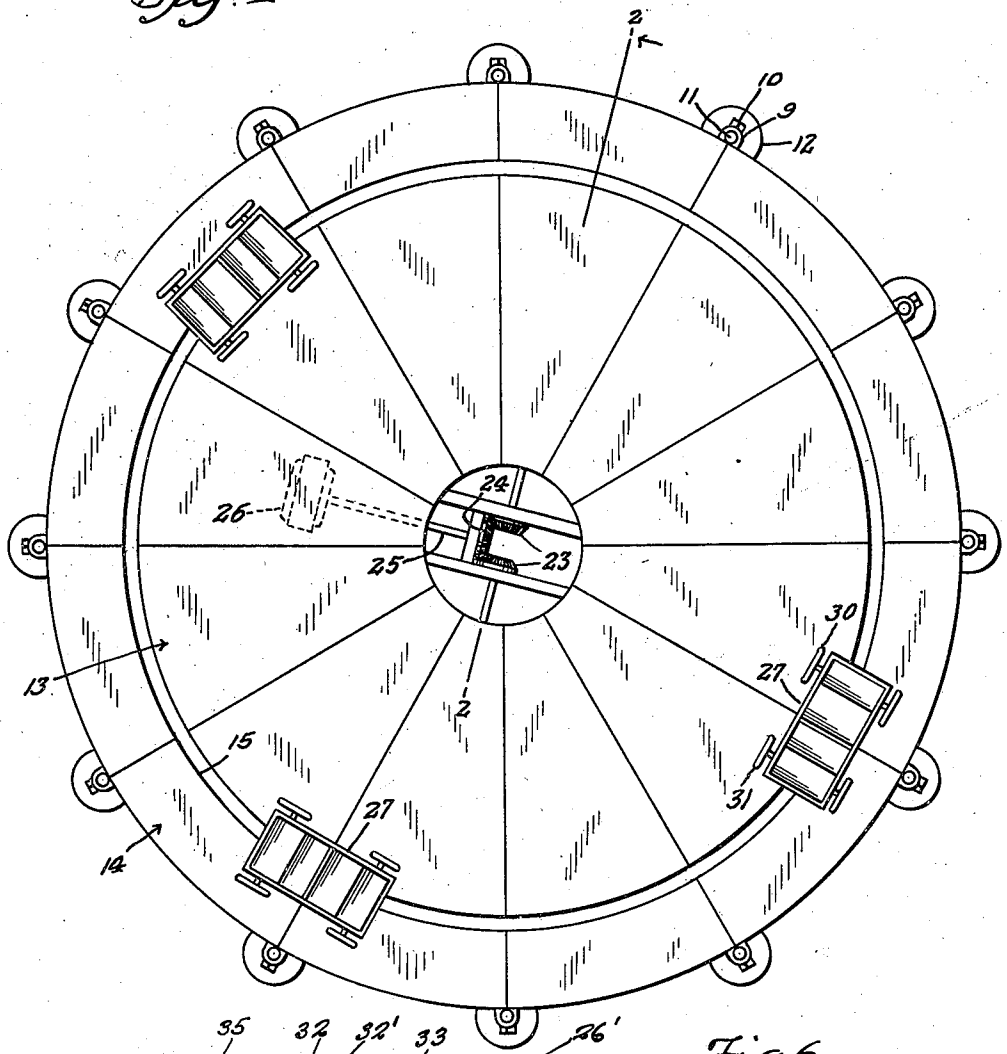
June 25, 1946. E. H. RIDENER 2,402,843

AMUSEMENT APPARATUS

Filed Feb. 5, 1944 3 Sheets-Sheet 1

Fig. 1.



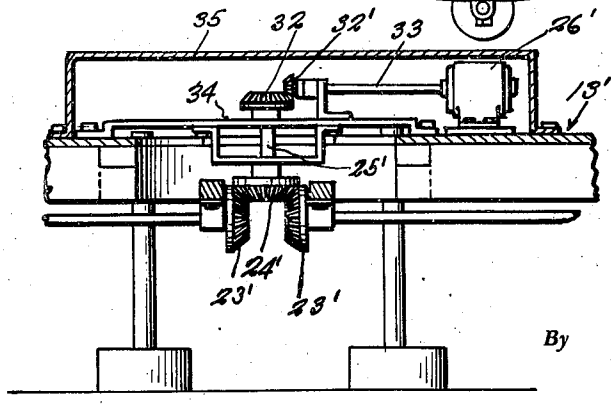




Fig. 6.

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AMUSEMENT APPARATUS

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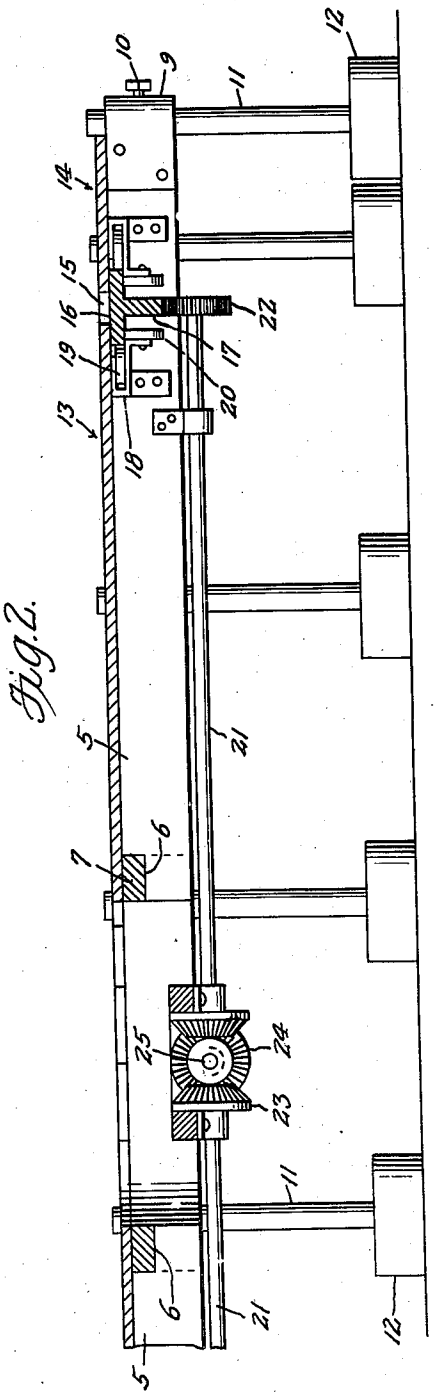


Fig. 2.

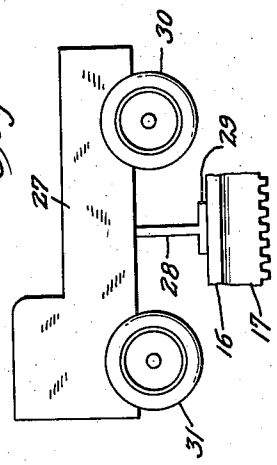


Fig. 5.

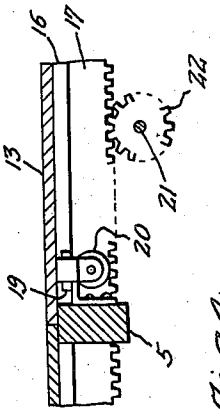


Fig. 4.

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AMUSEMENT APPARATUS

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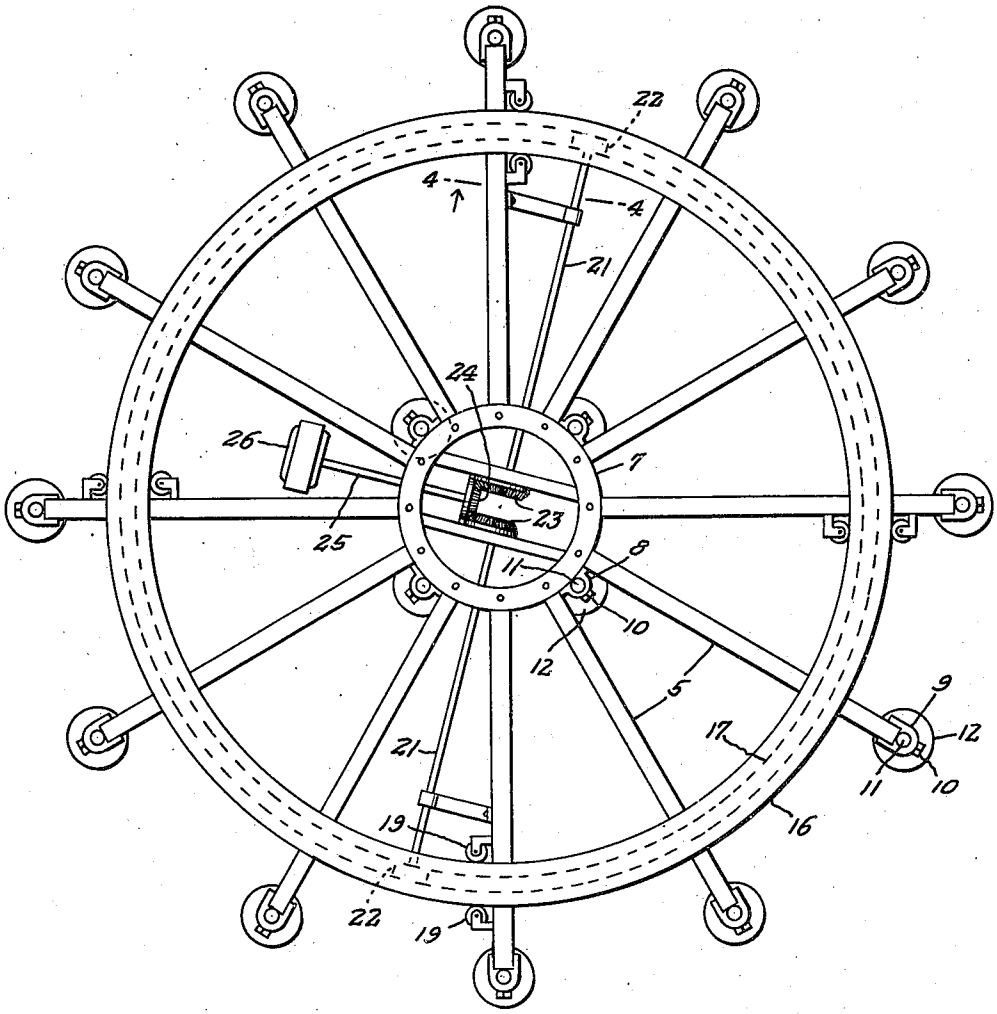


Fig. 3.

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Patented June 25, 1946 2,402,843

# UNITED STATES PATENT OFFICE

2,402,843

## AMUSEMENT APPARATUS

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Application February 5, 1944, Serial No. 521,251

2 Claims. (Cl. 272—48)

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The invention relates to amusement apparatus of the type known as "Roundabouts."

An important object of the present invention is to provide an amusement device of the above type embodying stationary, circular and ring-shaped platforms disposed in spaced concentric relation to afford an annular slot therebetween, an annular ring revolubly mounted directly beneath the slot and having power-operated driving means, and a plurality of passenger cars attached at intervals to the revoluble ring so as to move with the cars upon the platforms and create the impression that the cars are running independently upon said platforms.

A further object of the invention is to provide a roundabout of the above character wherein simple and efficient mounting and driving means are provided for the revoluble ring.

Another object of the invention is to provide simple and efficient means for mounting the platforms in co-planar relation in an elevated position and for leveling them wherever erected.

Another object of the invention is to provide for ready separation of the platforms and their mounting means, as well as to construct the platforms in sections which may be readily taken apart or assembled.

Still another object of the invention is to provide an amusement apparatus of the above character which is comparatively compact, simple and durable in construction, relatively inexpensive and easy to construct and operate, and otherwise well adapted to meet the requirements for a successful commercial use.

Other objects and features of the invention will become apparent from the following description when considered in connection with the accompanying drawings, and the invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a top plan view of an amusement apparatus constructed in accordance with the present invention.

Figure 2 is a fragmentary vertical section taken on line 2—2 of Figure 1, with the cars omitted.

Figure 3 is a view similar to Figure 1 with the platforms removed.

Figure 4 is a fragmentary detail view in vertical section and taken on line 4—4 of Figure 3.

Figure 5 is a side elevational view of one of the passenger cars and showing a manner of attaching the same to the revoluble ring.

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Figure 6 is a view similar to Figure 2, showing a modified form of the invention in which the driving motor is disposed on the inner platform adjacent its central opening.

Referring in detail to the drawings, the present apparatus includes a supporting frame embodying a circular series of spaced radial timbers 5 notched, as at 6, at the tops of their inner ends to receive an annular frame member 7 to which said timbers are secured by bolting or the like. Fixed at suitable intervals to the outer edge of annular frame member 7 and to the outer ends of the radial timbers 5 are vertical barrels 8 and 9, respectively, each of which is equipped with a set screw 10. Each of the barrels 8 and 9 slidably receives the upper end of a supporting post or standard 11 fixed to and rising centrally from a suitable base 12. Obviously, the set screws 10 may be tightened to impinge the posts 11 and secure the frame in a level position regardless of uneveness in the ground or supporting surface upon which the apparatus is erected.

Disposed upon this supporting frame is an inner circular platform 13 and an outer ring-shaped platform 14, said platforms being disposed in spaced concentric relation so as to define an annular slot 15 therebetween. Each platform is preferably composed of a series of similar radial sections secured in abutting relation by bolting the same to the timbers 5 and frame members 7.

Revolubly mounted directly beneath the slot 15 is a ring 16 that spans the slot 15 and has a central depending ring gear 17 rigid therewith. Fixed at intervals to certain of the radial timbers 5 are opposed pairs of brackets 18, each carrying a roller 19 engaging an edge of ring 16 and a roller 20 engaging the under face of said ring 16. In this way, the ring 16 is effectively supported for free rotation, and the radial timbers 5 are slotted downwardly from their upper edges to provide clearance for the ring gear 17.

Suitable means is provided for effectively driving the rotatable ring 16, and this preferably consists of diametrically opposed radial shafts 21 having pinions 22 at their outer ends meshing with the ring gear 17 at opposite sides of the latter, and having bevel pinions 23 fixed on their inner ends and disposed at opposite sides of and meshing with a further bevel pinion 24 at the center of the platform. Pinion 24 is carried by the inner end of a further radial shaft 25 suitably driven by a motor 26.

Arranged to ride upon the platforms in a cir-

cular path are a plurality of passenger cars 27. Any desired number of cars may be provided depending upon the spacing thereof and the size of the apparatus. These cars are preferably spaced at similar distances apart, and each has a rigid post 28 depending therefrom and extending through the slot 15, the lower end of the post being welded or otherwise secured at 29 to the upper face of the ring 16. Preferably, the post 28 of each car 27 is located centrally between the front and rear supporting wheels 30 and 31 of said car, and it will thus be seen that the cars are effectively attached to the ring 16 for travel with the latter when said ring 16 is revolved. Any suitable means may be provided for permitting the cars to readily follow the circular path which they are to travel, the present invention not being particularly concerned with the specific car construction per se. Also, the various parts are preferably detachably secured or bolted together so that they may be readily assembled or taken apart.

In operation, the motor 26 is placed into operation for driving the pinions 22 and thereby causing the ring 16 to revolve beneath the slot 15. The cars 27, being attached to the ring 16, will travel in a circular path upon the platforms 13 and 14 above said slot 15, and it will be noted that the arrangement is such as to create the impression that the cars are running independently upon the stationary platforms. The moving parts, except the cars, are effectively covered and protected so as to promote safety, and the whole construction is very simple, durable and compact. Accordingly, the construction provides for effectively carrying out the stated objects of the invention. It is, of course, to be understood that minor changes in details of construction are contemplated such as fall within the spirit and scope of the invention as claimed.

As shown in Figure 6, the pinion 24', meshing with pinions 23', may be provided on the lower end of a vertical shaft 25' projecting through the central opening of inner platform 13', the shaft 25' having a gear 32 on its upper end meshing with a pinion 32' on the horizontal power shaft 33 of a motor 26' mounted on said platform adjacent said central opening. Shaft 25' may be journaled in a frame 34 mounted across the opening of platform 13', and the gearing and motor may be covered by a casing 35.



What I claim as new is:

1. An amusement apparatus of the character described comprising a horizontal frame, circular and ring-shaped stationary platforms mounted upon said frame in spaced concentric relation to define a circular slot therebetween, said frame comprising a series of uniformly spaced radial timbers having the platforms secured upon the upper faces thereof, said timbers having notches under the circular slot, the inner ends of said timbers being notched at the upper sides thereof, an annular frame member received in said notches and secured to the timbers, a ring T-shaped in cross-section passing through the notches of the timbers and having the lower edge of its depending web formed with gear teeth, brackets carried by said timbers and carrying rollers engaging side edge faces and the under face of said ring at opposite sides of the web, a drive shaft having a gear meshing with the gear teeth of the ring to rotate the ring and objects over the platform having shanks passing through the slot and fixed to the ring.

2. In an amusement apparatus of the character described, a platform comprising a frame including a series of uniformly spaced radial timbers, vertical barrels attached to the outer ends of the radial timbers and projecting outwardly therefrom, each barrel having a set screw, and supporting standards each having a base for resting upon the ground and a post extending upwardly therefrom, said posts slidably passing through the barrels to sustain the frame in a level and predetermined elevated position.

EVERETT H. RIDENER.