

H. O. HAMILTON & S. J. P. SWALLENDER.

ROUNABOUT.

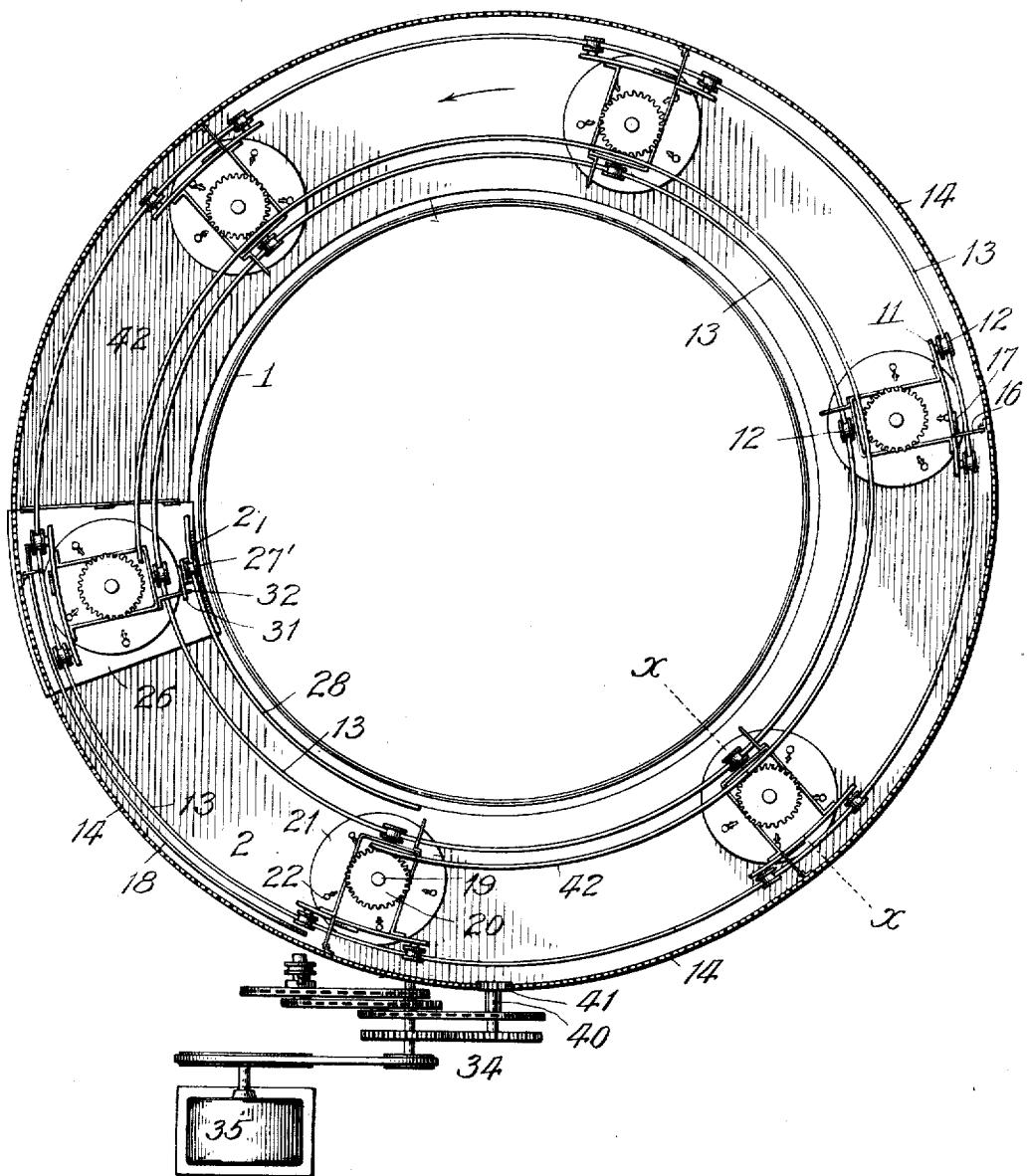
APPLICATION FILED MAR. 9, 1908.

906,625.

Patented Dec. 15, 1908

4 SHEETS—SHEET 1.

Fig. 1.



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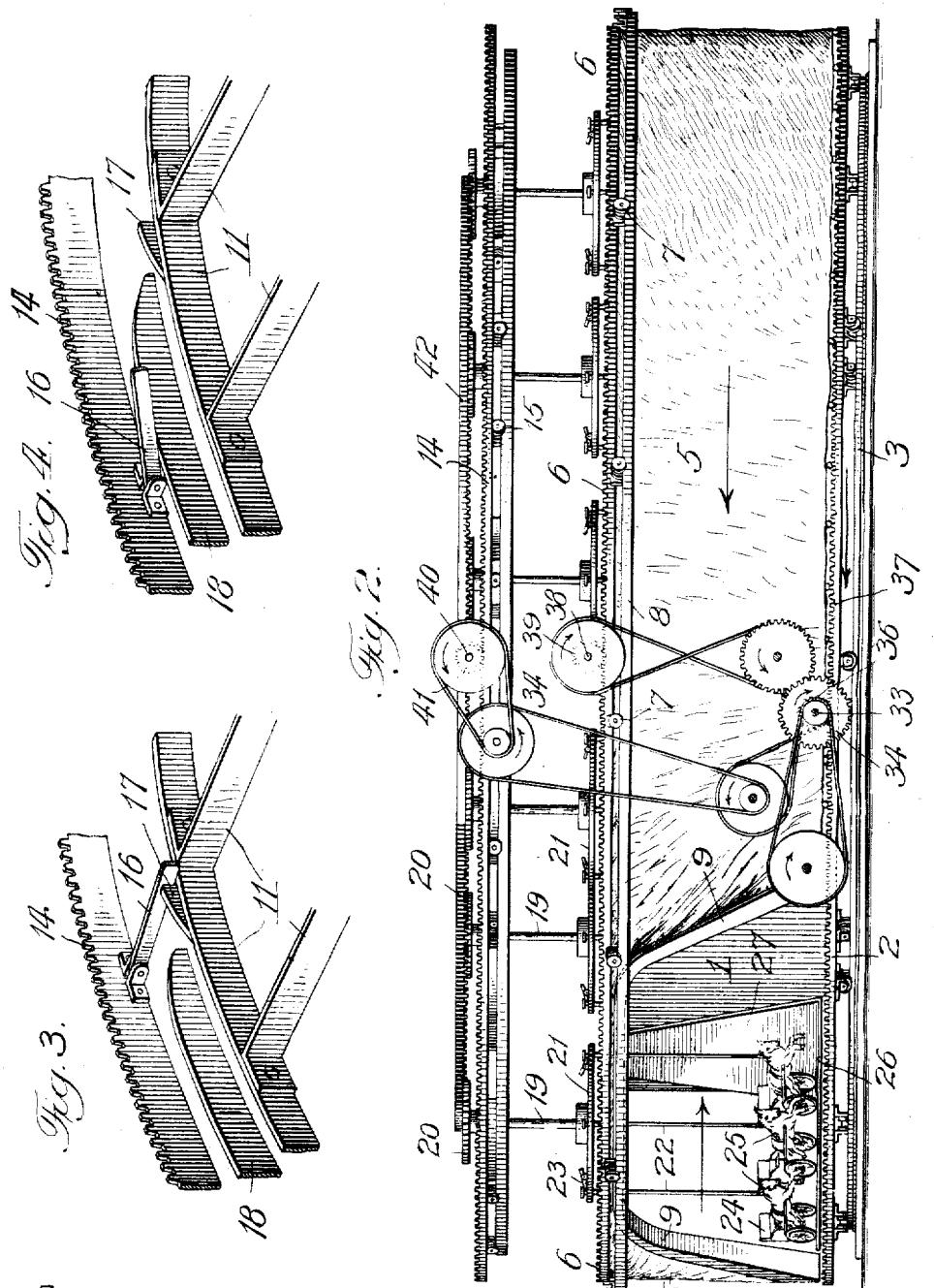
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4 SHEETS-SHEET 2



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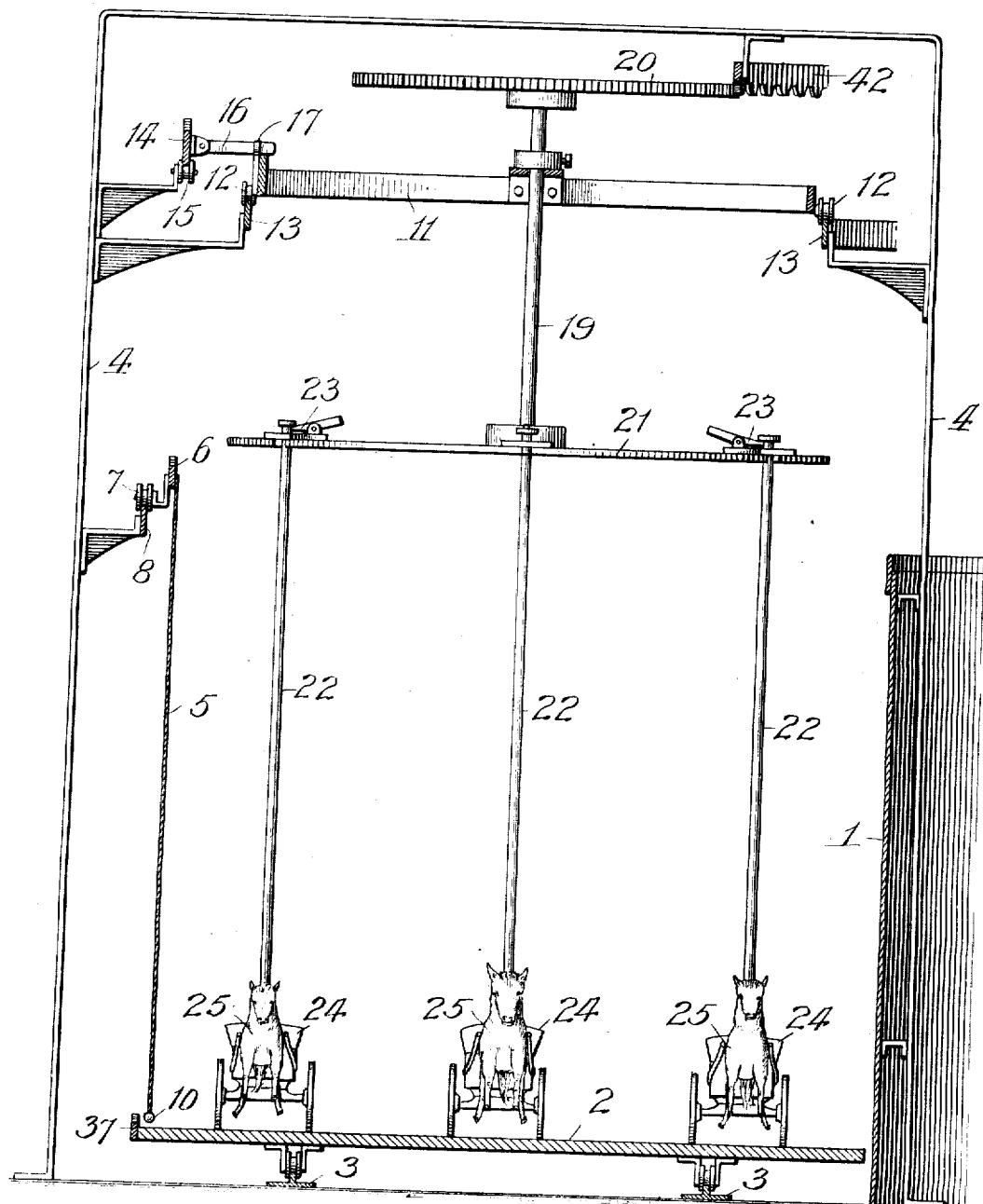
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4 SHEETS—SHEET 3.

Fig. 5.



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4 SHEETS—SHEET 4.

Fig. 6.

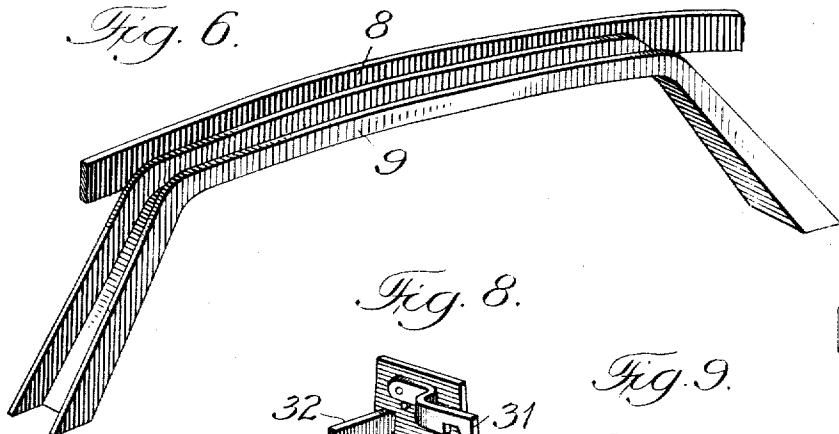


Fig. 8.

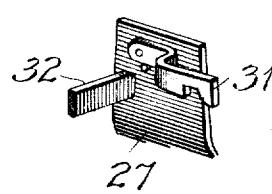


Fig. 9.

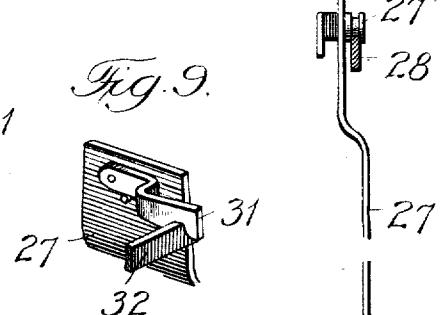


Fig. 7.

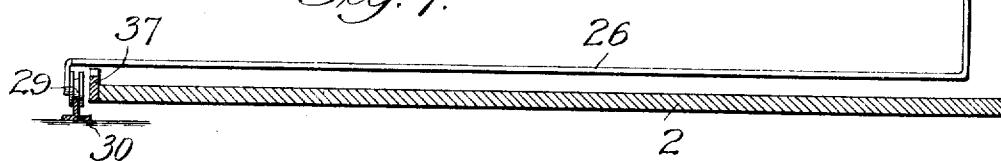
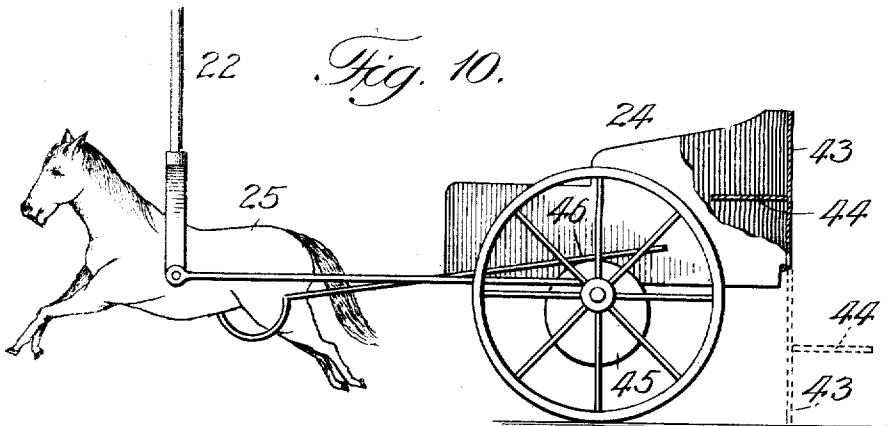


Fig. 10.



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UNITED STATES PATENT OFFICE.

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TO UNITED STATES AMUSEMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION
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ROUNABOUT.

No. 906,625.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed March 9, 1908. Serial No. 419,851.

To all whom it may concern:

Be it known that we, HENRY O. HAMILTON and SWANTE J. P. SWALLENDER, citizens of the United States of America and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Roundabouts, of which the following is a specification.

This invention relates to that class of amusement apparatus usually termed carousels, and in which the pleasure seeker is carried in a suitable vehicle or support, which in turn has movement in a circular path. And the present improvements have for their various objects:—to provide a simple and efficient structural arrangement and combination of parts whereby individual groups of passenger carrying vehicles or supports are given a travel around a local axis at the same time that the series of groups have movement around a main axis; to provide means whereby the loading and unloading of one group of the vehicles or supports can be safely and rapidly attained without disturbing the normal movements of the remaining groups; to provide a curtain moving in a direction opposite to the travel of said groups and adapted to give an illusive impression to the riders that they are moving at a high speed, and to provide a moving platform beneath said groups of vehicles or supports adapted to impart local movement to the individual vehicles or supports, and at the same time and in connection with the traveling curtain aforesaid aid in the illusion of the riders that they are moving at a high speed, all as will hereinafter more fully appear.

In the accompanying drawings:—Figure 1 is a plan view illustrating the general arrangement of the present apparatus, the stationary skeleton inclosing frame being omitted for better illustration of the mechanisms. Fig. 2, is a side view of the same. Figs. 3 and 4 are detail perspective views of the automatic trip mechanism by which an individual group of vehicles or supports are released from traveling engagement with the driving means by which they are normally moved. Fig. 5, is a detail vertical section on line $x-x$. Fig. 1. Fig. 6, is a detail perspective view of the runway for the traveling curtain, and by which such curtain is raised at entrance of the apparatus. Fig. 7, is a detail vertical section of the loading platform. Figs. 8 and 9, are detail perspective views of the latch mechanism for connecting the loading plat-

form and the carrying frame of a group of vehicles, so that the same will move together in a manual movement of said platform. Fig. 10, is an elevation partly in section of one of the vehicles or trailing carts.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 represents a stationary circular wall or fence around which the movable portion of the apparatus travels, and such wall may carry a panoramic scene, as usual in the present class of pleasure apparatus.

2 is an annular platform, supported to travel in a circular path around the wall 1 upon suitable circular tracks 3 or other usual and ordinary means.

4 is a stationary annular framework enclosing the traveling platform 2, and affording support for the different parts of the apparatus hereinafter described.

5 is an endless annular curtain of textile or like flexible material arranged outside the traveling platform 2 to form the outer inclosure for the same. Such curtain may like the wall or fence 1 carry a panoramic scene, and is adapted to have a circular travel in the direction the same as the moving platform 2, and to such end is attached to an overhead circular bar 6 supported by track wheel 7 on a stationary circular track 8, carried on the stationary frame 4, aforesaid; motion is imparted to the circular bar 6, by the driving mechanism hereinafter described.

The flexible nature of the curtain 5 is a material part of the present construction, in that it admits of the curtain being automatically raised and carried over the driveway through which passengers enter and leave the apparatus; such automatic operation being effected by the following means:

9, is a stationary header arranged above said doorway and having inclined ends as shown more particularly in Figs. 2 and 6; such header is of an open top channel form and is adapted to receive the curtain and fold the same in its passage along the header leaving the space or doorway beneath the header free and unobstructed.

10, are a series of weights or balls secured to the lower end of the curtain for the purpose of aiding in holding the curtain in its normally depending condition.

11, are a series of trucks arranged in circularly spaced relation above the traveling platform 2, and supported by track wheels

12 upon stationary circular tracks 13, so as to travel in a circular path above said platform in the normal operation of the apparatus.

5 14, is a circular rack traveling on roller bearings 15 on the stationary frame 4, and provided with a series of pivoted fingers 16 adapted to engage behind stops 17 on the trucks 11, to cause said trucks to move in 10 unison with said rack 14, while the fingers 16 are in engagement with the stops 17.

18, is a cam segment carried by the stationary frame 4 above and adjacent to the doorway before described, and in the path of 15 the aforesaid pivoted fingers 16. Such cam segment is adapted to disengage the finger 16 from engagement with the stop 17 of a particular truck 11, as said truck reaches the doorway, leaving the truck stationary at 20 such point for the loading and unloading operations hereinafter more particularly described.

19, are a series of central vertical shafts journalized in the trucks 11 and carrying at 25 their upper ends gear wheels 20 having operative engagement with operating means hereinafter described, and carrying at their lower ends the series of carrying heads or spiders of the groups of passenger carrying vehicles or 30 supports now to be described.

21, are the heads or spiders, above referred to, and secured to the lower ends of the vertical shafts 19 so as to rotate therewith in a plane above the traveling platform 2.

22, are clusters of suspension rods depending from the series of heads or spiders 21 aforesaid, and each cluster comprising a circularly arranged group of said rods individual to a single head or spider 21, as shown. The connection between the said rods and the heads or spiders is preferably made by 40 latch mechanisms 23, of any ordinary form which will permit of ready lateral removal of the rods when required in the repair, overhauling, etc., of the apparatus.

24, are the series of passenger carrying vehicles or supports of any usual form, preferably of the trailing cart form shown, the 50 forward part of which is formed by an effigy of a running horse 25, to which a yoke at the lower end of the particular suspension rod 22 is attached as shown.

Arranged in the manner above described, 55 a series of individual groups of vehicles travel in rotation around the main axis of the apparatus, and at the same time each group has an individual rotation around its own axis, and as so arranged the illusion is given to the 60 passengers in a group that they are constantly changing from a slow to a fast part of the track, and vice versa, and are repeatedly gaining and losing on each other, as in a horse race.

65 26, is the loading platform of a segmental

form, arranged immediately adjacent to and above the traveling platform 2, and held in disconnected relation thereto by one or more hanger straps 27 carrying track wheels 27' on their upper ends; such track wheels in turn moving on a horizontal segmental track 28 carried by the inner circular wall or fence 1. At its outer end said platform is supported by track wheels 29 moving on a ground track, as shown in Fig. 7. The loading platform 26 is adapted to receive in succession each individual group of vehicles or supports 24 as they reach the entrance or doorway of the apparatus, and the arrangement is such that as a particular group of vehicles move onto the loading platform, the driving mechanism through which said group had movement in a circular path, as well as the mechanism through which the group had a circular travel around a local axis, are released so that the said group of vehicles will be left stationary upon the loading platform for the purpose of unloading and reloading.

With the completion of the reloading of the group of vehicles, the loading platform is 90 manually moved in the direction of travel to bring the said group of vehicles back into operative engagement with the sets of operating mechanisms above referred to, and in order to insure a movement of said group of vehicles in unison with the manually effected movement of the loading platform, a latch mechanism as follows is employed:

31, is a gravity dog pivoted to the hanger strap 27 of the loading platform, and under 100 which a fixed projection 32 carried on the truck frame 11 of each group of vehicles, is adapted to ride as each individual group comes to rest on the loading platform and so as to be in line for engagement with said gravity dog 31, as the loading platform is manually moved in manner above stated.

33, is a countershaft receiving rotation through suitable intermediate gearing from a power source 35. Such shaft carries a spur wheel 36 meshing with an annular gear rim 37 attached to the platform 2, to impart circular travel thereto. 38, is a companion countershaft receiving rotation in like manner from the power source 35, and provided with a spur wheel 39 in mesh with an annular gear on the circular bar 6 carrying the endless curtain 5 before described, and adapted to impart circular travel thereto. 40, is another countershaft receiving rotation from 120 the power source 35 and provided with a spur wheel 41, in mesh with an annular gear of the circular rack 14, to impart circular travel thereto, and in turn to the series of trucks 11 before described.

42, is a mutilated annular gear secured to the stationary frame 4 and meshing with the series of gear wheels 20, before described, and adapted in the circular travel of the trucks 11 to impart individual rotation to the heads 130

or spiders 21 carried by said trucks, and a local travel of the suspension rods 22, and trailing carts 24 around a local axis individual to each group as before set forth.

5 The mutilation of the annular gear 42 is located above the loading platform 26, so that the local rotation of the group of trailing carts 24 will cease while the same are on the loading platform.

10 With a view to aid in the rapid loading and unloading of the series of trailing carts 24, in each group, the back 43 of each cart body is hinged at bottom to said cart body, and provided with a lateral board 44 midway 15 its height. Such board in the normal position of the back as shown in full lines in Fig. 10, constitutes the seat of the vehicle, and when swung down into the position shown in dotted lines in said Fig. 10 constitutes a stop 20 for the passengers mounting and dismounting from the cart.

45, is an eccentric carried on the axle of a trailing cart 24, and adapted, through the bar 46, to impart a rocking movement to the 25 horse effigy 25 in the normal operation of the apparatus.

The general operation of the apparatus is as follows:—Assuming the parts are in the position shown in Fig. 2 with a group of passenger vehicle or supports in a stationary 30 condition on the loading platform, to permit of the safe and convenient loading of the passengers into said vehicles. With the loading accomplished, the operator shifts the loading 35 platform around to the right, and until the end of the cam segment 18 is passed, allowing the pivoted finger 16 to drop into engagement with the stop 17 in the truck 11 carrying said group of vehicles, and so that the group 40 of vehicles will be in engagement with the continuously moving circular rack 14, to be carried therewith around the main axis of the apparatus. With the commencement of said travel around the main axis, the gear wheel 45 20 of the group comes into engagement with the mutilated rack 42, and accordingly the said group will receive rotation around its local axis. The two rotations just described in connection with the oppositely moving 50 platform 2 and curtain 5 are adapted to give a very vivid impression or illusion to the passengers that they are moving at a very rapid rate, and that the pace at which they are going is constantly changing, with one ahead at 55 one time and behind at another, in manner similar to a horse race. During the progress of the travel of the individual group just described, the next succeeding group comes onto the loading platform, becomes stationary, is unloaded and again reloaded, and 60 finally moved into operative engagement with the driving mechanisms, to follow the circuit, and so on with the entire series of groups, and a continued repetition of the op-

erations above described with each succeeding group as the loading platform is reached. 65

Having thus fully described our said invention what we claim as new and desire to secure by Letters Patent, is:—

1. In a roundabout, the combination of a 70 series of groups of passenger vehicles, means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, and a platform traveling in a direction opposite to said 75 groups.

2. In a roundabout, the combination of a 80 series of groups of trailing passenger vehicles means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, and a platform traveling in a direction opposite to said groups.

3. In a roundabout, the combination of a 85 series of groups of passenger vehicles, means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said groups, and a traveling curtain inclosing said 90 platform.

4. In a roundabout, the combination of a 95 series of groups of trailing passenger vehicles means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said groups, and a traveling curtain inclosing said 100 platform.

5. In a roundabout, the combination of a 100 series of groups of passenger vehicles, means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said 105 groups, a flexible traveling curtain inclosing said platform, and an overhead runway adapted to engage and raise the curtain at the entrance of the apparatus.

6. In a roundabout, the combination of a 110 series of groups of trailing passenger vehicles means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said 115 groups, and a loading platform arranged above said traveling platform.

7. In a roundabout, the combination of a 120 series of groups of passenger vehicles, means for imparting movement to the same in a circular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said groups, and a loading platform arranged 125 above said traveling platform.

8. In a roundabout, the combination of a series of groups of passenger vehicles, means for imparting movement to the same in a cir-

cular path, means for imparting rotation to each group around a local axis, a platform traveling in a direction opposite to said groups, a flexible traveling curtain inclosing 5 said platform, an overhead runway adapted to engage and raise the curtain at the entrance of the apparatus, and a loading platform arranged above said traveling platform.

10 9. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven annular rack, latch fingers on said rack, stops on the trucks adapted for 15 engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, and a series of passenger vehicles carried by said trucks.

10 10. In a roundabout, the combination of a 20 series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven annular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said 25 fingers from said stops, a series of passenger vehicles carried by said trucks, a platform arranged beneath said vehicles and having movement in a direction opposite thereto, 30 and a loading platform arranged above said movable platform.

11. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven annular rack, latch fingers on 35 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, and a traveling curtain 40 inclosing said series of vehicles.

12. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven annular rack, latch fingers on 45 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, a flexible traveling curtain inclosing said vehicles, and an 50 overhead runway adapted to engage and raise said curtain at the entrance of the apparatus.

13. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on 55 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said 60 fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular 65 cluster of depending rods carried by each

head or spider, and a series of passenger vehicles attached to said cluster of rods.

14. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, 70 a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts journaled 75 in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each 80 head or spider, and a series of trailing passenger vehicles attached to said cluster.

15. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, 85 a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts 90 journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods 95 carried by each head or spider, a series of passenger vehicles attached to said cluster of rods, and a platform traveling in a direction opposite to said vehicles.

16. In a roundabout, the combination of a 100 series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage 105 said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods 110 carried by each head or spider, a series of trailing passenger vehicles attached to said cluster of rods, and a platform traveling in a 115 direction opposite to said vehicles.

17. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on 120 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts 125 journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of 130

passenger vehicles attached to said cluster of rods, a platform traveling in a direction opposite to said vehicles, and a traveling curtain inclosing said platform.

5 18. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of trailing passenger vehicles attached to said 15 cluster of rods, a platform traveling in a direction opposite to said vehicles, and a traveling curtain inclosing said platform.

19. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage 25 said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of 30 passenger vehicles attached to said cluster of rods, a platform traveling in a direction opposite to said vehicles, a flexible traveling curtain inclosing said platform, and an overhead runway adapted to engage and raise the curtain at the entrance of the apparatus.

20. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted 45 to disengage said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary mutilated rack meshing with said gears, heads or spiders attached to the lower ends 50 of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of passenger vehicles attached to said cluster of rods, a platform traveling in a direction opposite to said vehicles, and 55 a loading platform arranged above said traveling platform.

21. In a roundabout, the combination of a

series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on 65 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary 70 mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of trailing passenger vehicles 75 attached to said cluster of rods, a platform traveling in a direction opposite to said vehicles, and a loading platform arranged above said traveling platform.

22. In a roundabout, the combination of 80 a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven circular rack, latch fingers on said rack, stops on the trucks adapted for engagement with said latch 85 fingers, a stationary cam segment adapted to disengage said fingers from said stops, central shafts journaled in said trucks and provided with gear wheels, a stationary 90 mutilated rack meshing with said gears, heads or spiders attached to the lower ends of the central shafts, a circular cluster of depending rods carried by each head or spider, a series of passenger vehicles attached to said cluster of rods, a platform traveling 95 in a direction opposite to said vehicles, a flexible traveling curtain inclosing said platform, an overhead runway adapted to engage and raise the curtain at the entrance of the apparatus, and a loading platform arranged 100 above said traveling platform.

23. In a roundabout, the combination of a series of trucks adapted to move in a circular path, circular tracks supporting said trucks, a power driven annular rack, latch fingers on 105 said rack, stops on the trucks adapted for engagement with said latch fingers, a stationary cam segment adapted to disengage said fingers from said stops, a series of 110 passenger vehicles carried by said trucks, a platform arranged beneath said vehicles and having a movement in a direction opposite thereto, a loading platform arranged above said movable platform, a gravity dog carried by said loading platform, and stops on the 115 trucks adapted to be engaged by said dog.

Signed at Chicago, Illinois, this 7 day of March 1908.

HENRY O. HAMILTON.
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Witnesses:
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A. L. McEVILLY.