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Fouché

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[54] **AMUSEMENT PARK RIDE**

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[52] **U.S. Cl.** **272/29,** 272/51

[51] **Int. Cl.** **A63g 1/38,** A63g 1/44

[58] **Field of Search** 272/29, 36, 38, 44, 7

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Primary Examiner—Anton O. Oechsle

Assistant Examiner—Arnold W. Kramer

[57] **ABSTRACT**

An amusement park ride characterised in that it comprises a main platform adapted to be rotatably driven about a vertical axis. A telescopic mast is suspended from the upper portion of said frame structure by means of a horizontal shaft carried by said frame structure with said mast being adapted to be pivoted in a plane perpendicular to said horizontal shaft by a fluid actuated cylinder. An auxiliary platform at the top end of said mast and normally perpendicular thereto is pivoted by a fluid actuated cylinder. Radial cantilever arms are disposed at spaced angular intervals at the upper portion of said auxiliary platform and are adapted tp pivot in radial planes by the actuation of a fluid cylindrical controlled plate. Gondolas or cars are suspended from the outer ends of said radial arms and power drives are provided for controlling at will and independently from one another the rotation of said frame structure with the elements carried thereby, the spreading out or the retraction of the telescopic mast, the swinging of said telescopic mast about the horizontal suspension shaft connecting same to said frame structure, the swinging movements of said radial arms and also of the gondolas carried thereby in radial planes, and the inclination of said auxiliary platform supporting said radial arms in relation to a horizontal plane.

6 Claims, 9 Drawing Figures

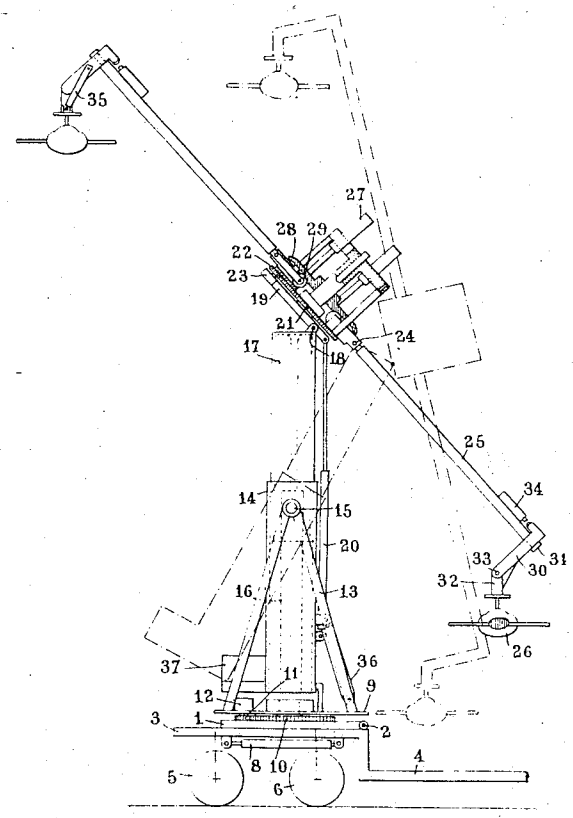

Fig. 1.

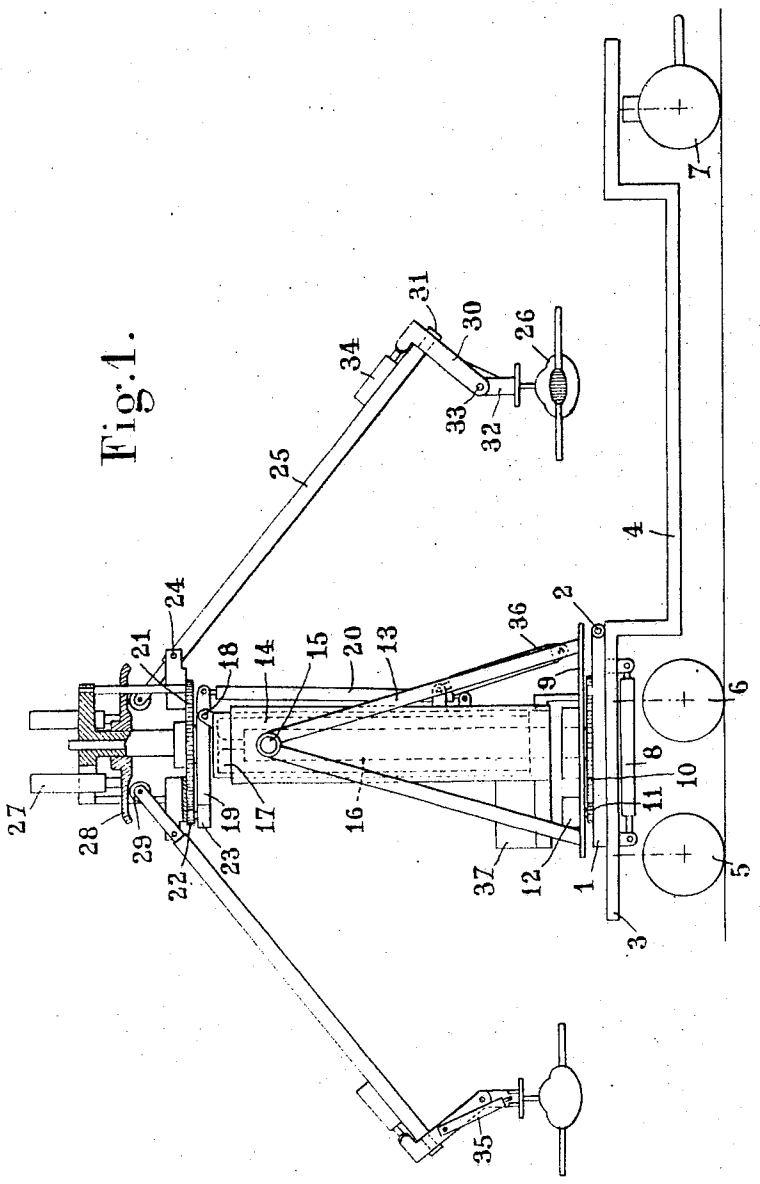
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Fig. 2.

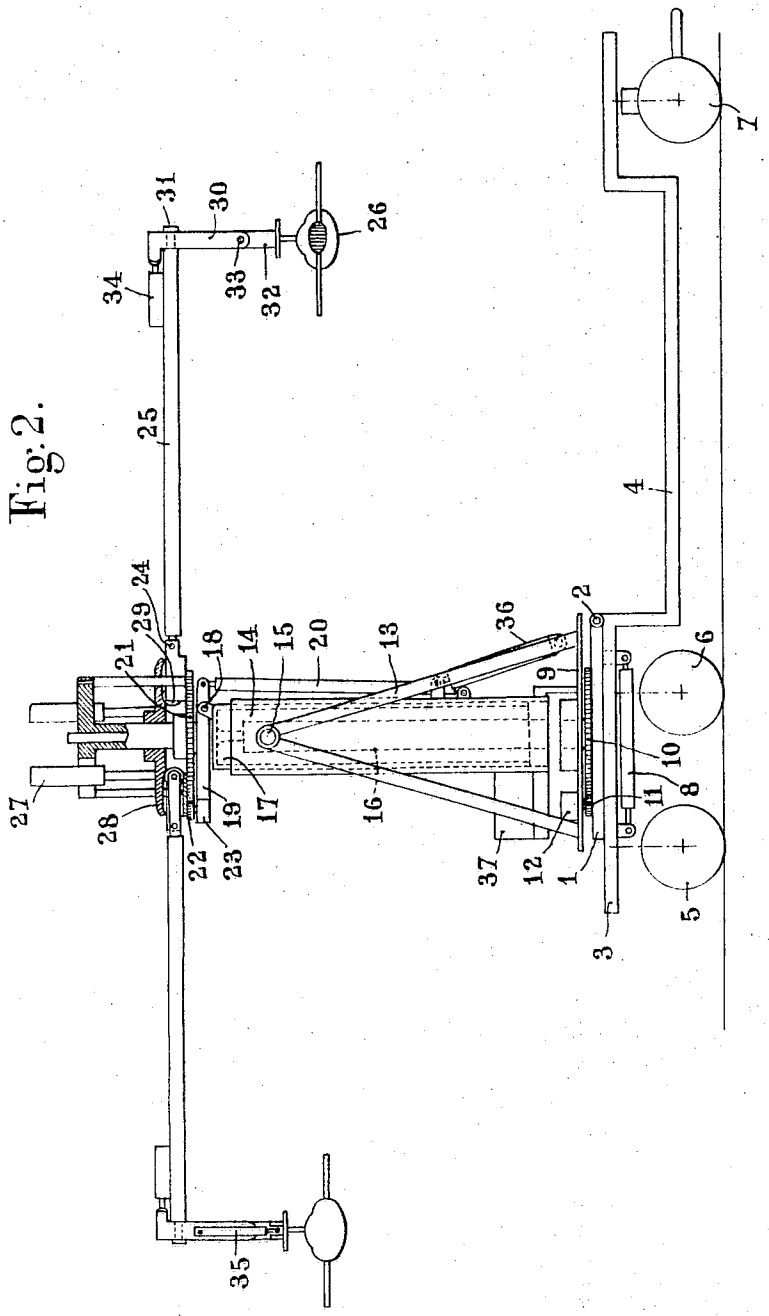
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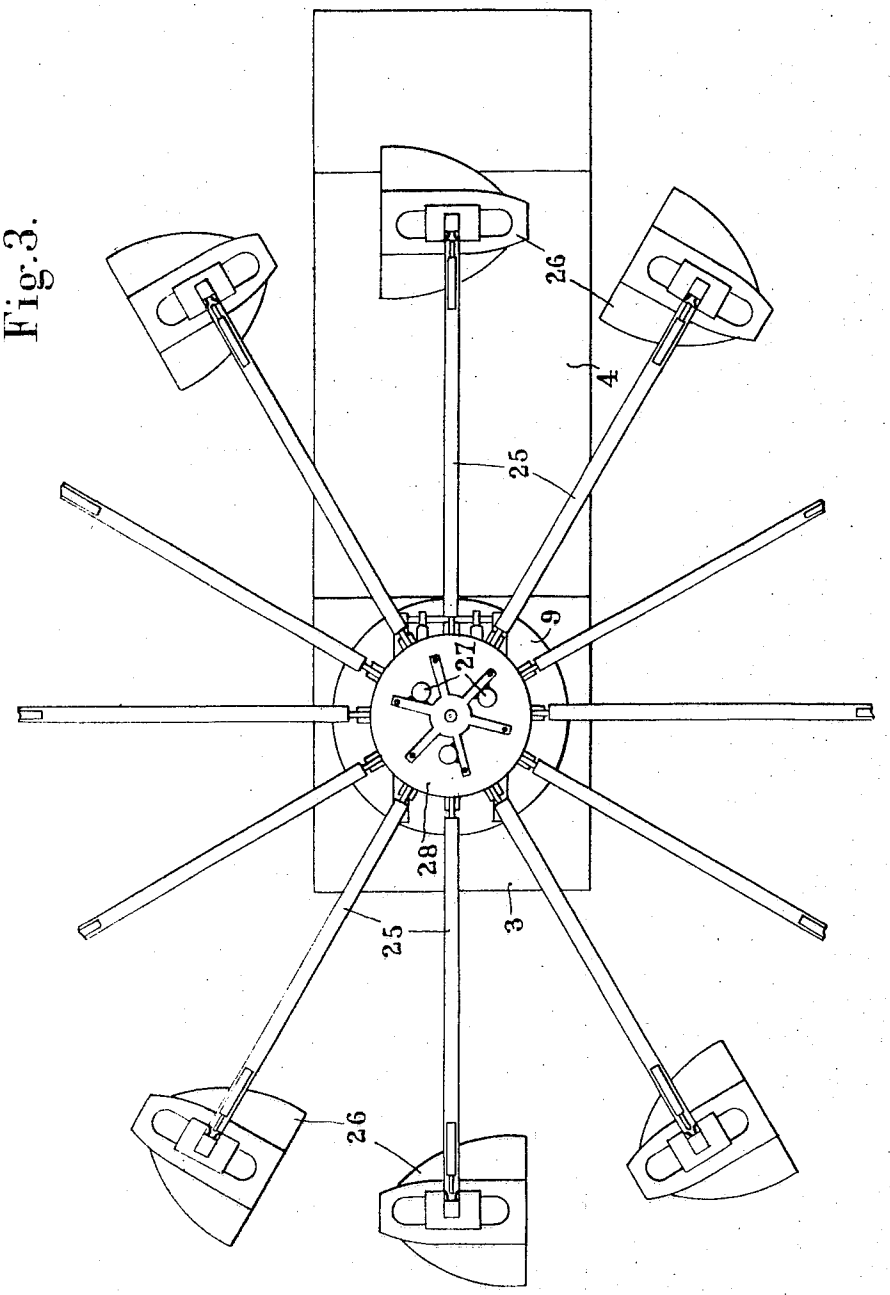
Fig.3.



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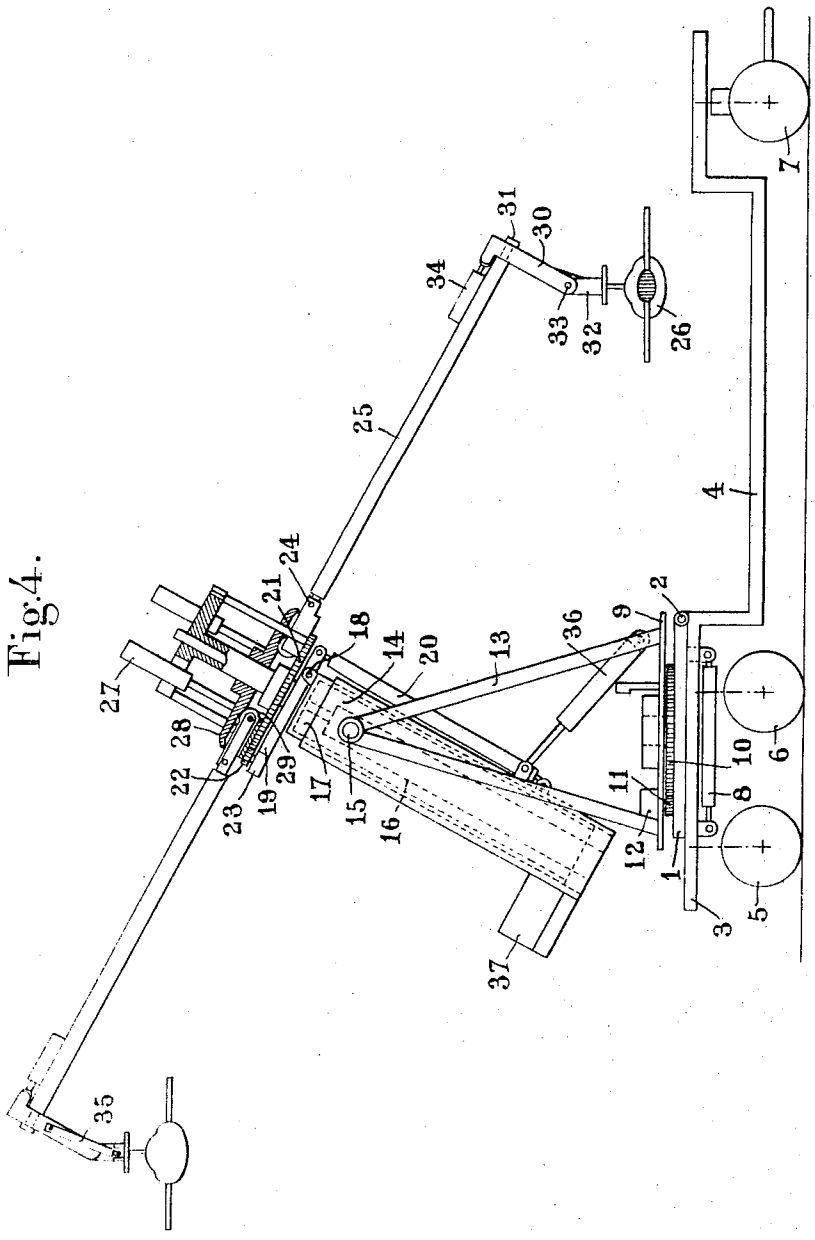
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Fig. 5.

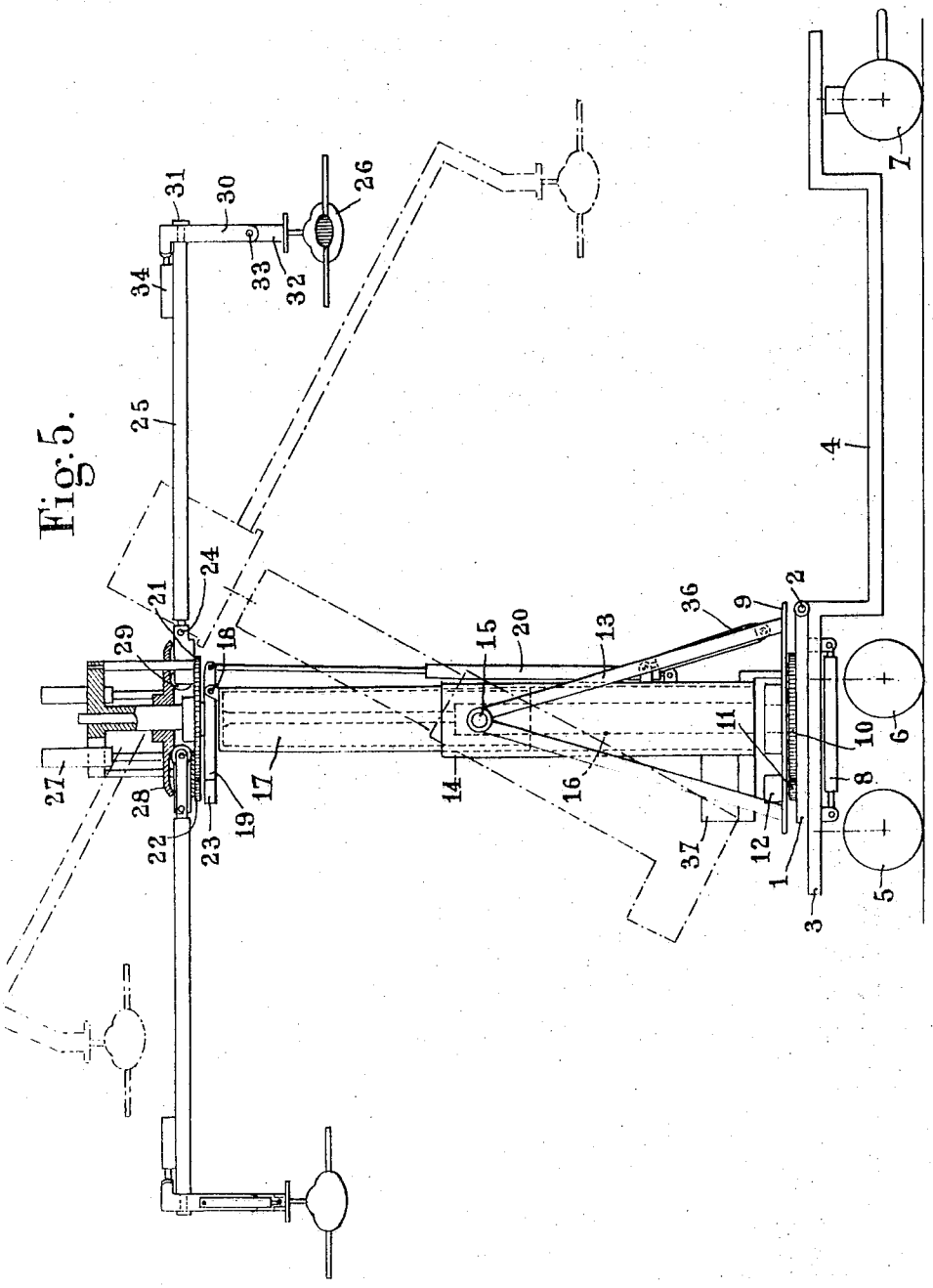
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Fig.6.

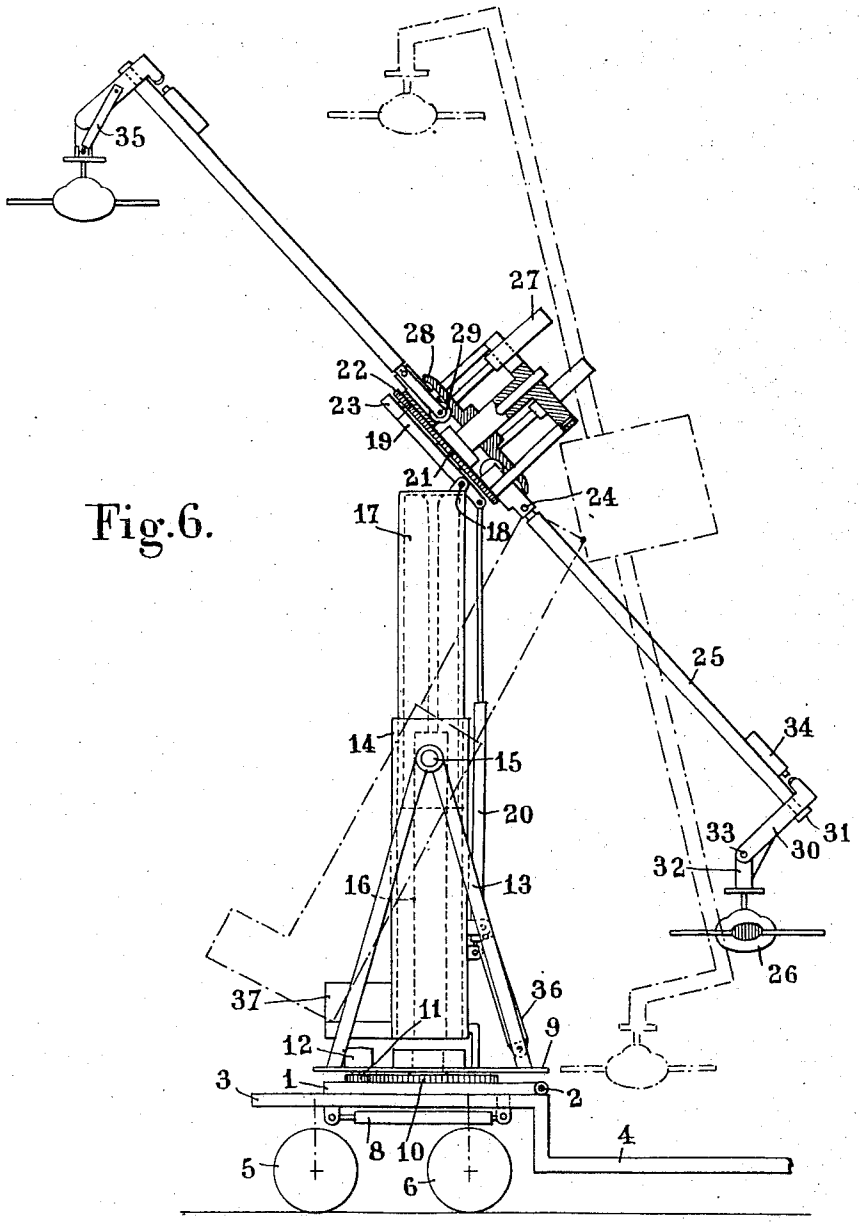
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Fig. 7.

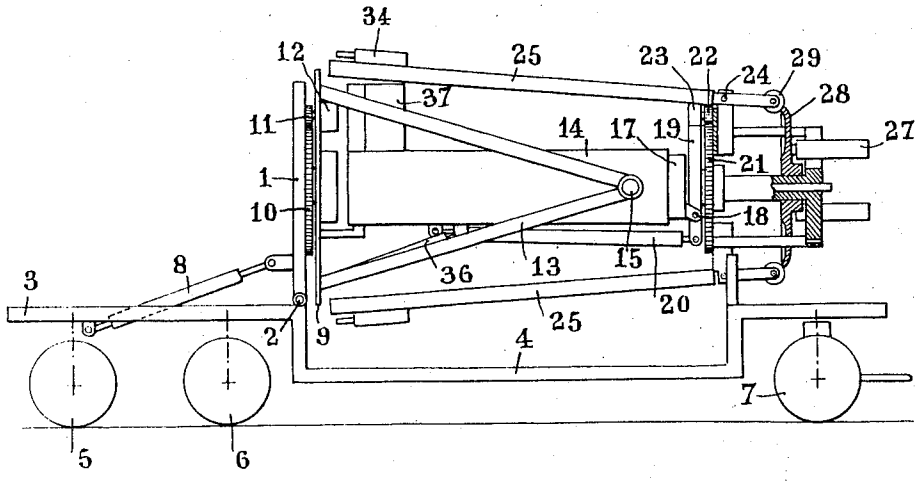
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Fig.8.

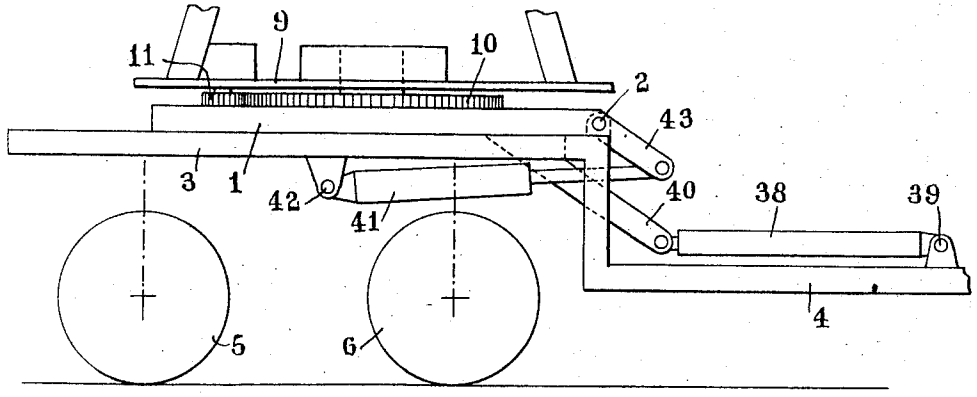
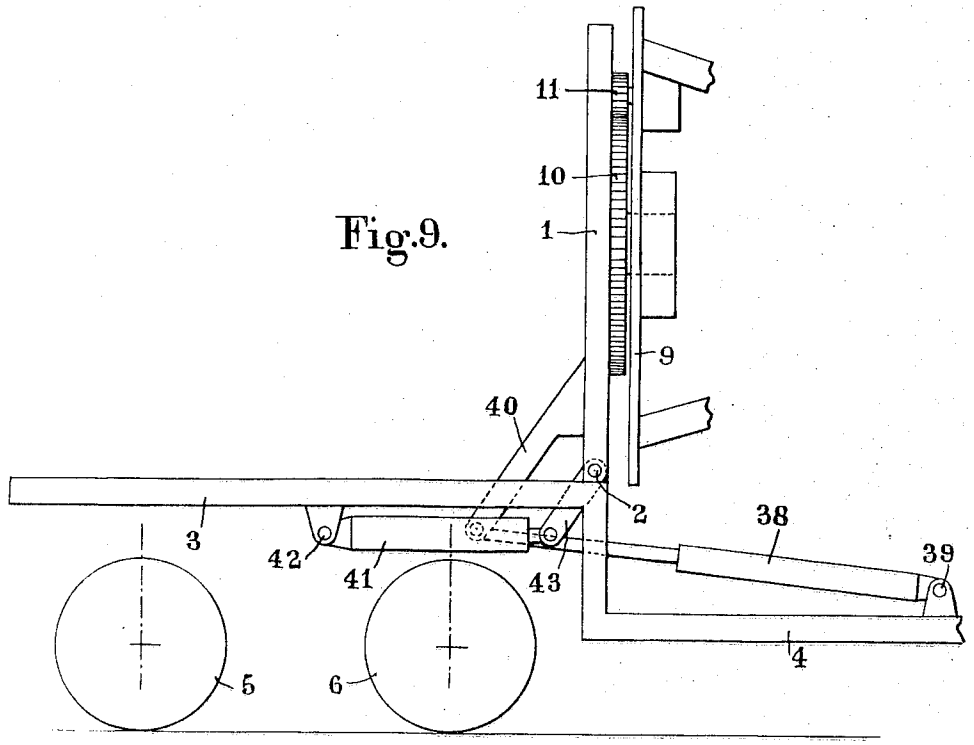


Fig.9.



AMUSEMENT PARK RIDE

BACKGROUND OF THE INVENTION

Field of the Invention : This invention relates in general to amusement park rides and more particularly to rides intended for "fun fairs" or the like. From the commonest merry-go-round to the highly sophisticated modern inventions in the field, these rides are intended to provide thrill and more or less violent excitment to vistors of all ages of these fun fairs.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a ride capable of causing an excitment differring from that given by hitherto known fun fair or like rides and merry-go-rounds while affording a wide range of variation in the thrill and excitment. Moreover, the ride according to this invention is so arranged that it can be mounted permanently on the front or rear portion of a trailer for transporting same from one site to another; to this end, the component elements of the ride are adapted to be folded or collapsed to a horizontal position, either backwards or forwards, above the rear or front portion of the trailer, respectively, without requiring any dismantling or teardown except for the gondolas or like cars intended for receiving the passengers, with the possibility of transporting these gondolas or cars on the same trailer. When arriving at the intended site, the trailer is wedged, the ride elements are firstly erected to a substantially vertical position, then brought to their normal operating position, the only assembling operation consisting in suspending the gondolas or cars from their supporting or cantilever arms. It is clear that with a ride according to this invention idle periods are minimized as well as the crew necessary for erecting, dismantiling and transporting the ride.

To this end, the fun fair ride according to this invention is characterised in that it comprises a main platform, a frame structure carried by said platform and adapted to be rotatably driven about a vertical axis, a telescopic mast suspended from the upper portion of said frame structure by means of a horizontal shaft carried by said frame structure, said mast being adapted to be pivoted in a plane perpendicular to said horizontal shaft; an auxiliary platform at the top end of said mast and normally perpendicular thereto, radial cantilever arms are disposed at spaced angular intervals at the upper portion of said auxiliary platform and adapted to pivot in radial planes, gondolas or cars suspended from the outer ends of said radial arms and power means for controlling at will and independently from one another the rotation of said frame structure with the elements carried thereby, the spreading out or the retraction of the telescopic mast, the swinging of said telescopic mast about the horizontal suspension shaft connecting same to said frame structure, the swinging movements of said radial arms and also of the gondolas carried thereby in radial planes, and the inclination of said auxiliary platform supporting said radial arms in relation to a horizontal plane.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view showing diagrammatically the trailer-supported ride structure with the radial cantilever arms inclined downwards and the gondolas carried thereby in their lower position;

FIG. 2 is a similar view with the radial arms raised to the horizontal;

FIG. 3 is a plane view from above of the structure shown in FIGS. 1 and 2;

FIG. 4 is a side elevational view showing the ride with the telescopic mast inclined to the vertical;

FIG. 5 is a view similar to FIGS. 2 and 4 showing the ride with the telescopic mast in its extended condition;

FIG. 6 is a view similar to FIG. 5 but with the auxiliary platform supporting the radial arms in an inclined position;

FIG. 7 illustrates the ride in its fully collapsed or folded condition in the trailer, i.e., ready for transporting the ride to another site or erecting same for operating same; and

FIGS. 8 and 9 detail views showing the platform supporting the assembly in its operative and retracted positions, respectively.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The main platform 1 supporting the complete ride structure is adapted to pivot about a horizontal transverse shaft 2 carried by the rear portion 3 of a trailer 4 of suitable design, rolling on the wheels 5, 6 of a pair of rear axles and on the wheels 7 of a front steering axle; a fluid-actuaded cylinder 8 is provided for pivoting the main platform 1 about the horizontal transverse shaft 2.

Mounted on this main platform 1 is a plate 9 adapted to rotate about the vertical axis of the platform, this plate 9 being rigid with a toothed ring 10 meshing with a pinion 11 adapted to be rotatably driven from suitable power means 12.

The plate 9 carries a frame structure 13 having substantially the shape of an inverted V, from which the telescopic mast 14 is pivotally suspended by means of a horizontal shaft 15.

A central fluid-actuated cylinder 16 is provided for controlling at will the extension or retraction of the upper telescopic section 17 of the pivoting mast 14. Also pivotally mounted about a horizontal transverse shaft 18 carried by the upper portion of the upper telescopic section 17 of mast 14 is an auxiliary platform 19 adapted to be inclined by means of a fluid-actuated cylinder 20 about said shaft 18.

A toothed wheel 21 is pivotally mounted about a central shaft perpendicular to said auxiliary platform 19 and carried by this shaft, as shown; said wheel 21 is in constant meshing engagement with a drive pinion 22 operatively connected to suitable power means 23.

Radial cantilever arms 25 carrying at their outer ends gondolas or cars 26 for the passengers are rotatably rigid with said toothed wheel 21 but adapted to pivot vertically in relation thereto by means of pivot shafts 24 parallel to the plane of said wheel 21; a set of fluid-actuated cylinders 27 co-acting with a sliding plate 28 and rollers 29 carried by the inner ends of said radial arms 25 are provided for controlling the downward inclination or tilt of said radial arms 25, or their return to the horizontal position.

The gondolas 26 are suspended from said arms 25 by means on the one hand of cranked levers 30 fulcrumed to pivot pins 31 in axial alignment with said arms and pivot pins 33 perpendicular to said pivot pins 31; links 32 connect the gondolas to said pivot pins 33; further-

more, hydraulic means **34** are provided for locking the cranked levers **30** in radial planes, and hydraulic shock-absorbers **35** are also provided for limiting the radial swinging movements of the links **32** and therefore of the gondolas **26.**

The inclination of the telescopic mast **14** may be controlled by means of another fluid-operated cylinder **36,** and a counterweight **37** is for balancing the assembly.

To transport the ride according to this invention from one site to another, the only step required consists in removing the gondolas **26;** then, the radial cantilever arms **25** are folded about the telescopic mast **14** and, as shown in FIG. **7,** the cylinder **8** is operated for pivoting the main platform **1** about the horizontal transverse shaft **2** until it is substantially parallel to the main plane of trailer **4;** the gondolas **26** can easily be stored on the rear portion **3** of this trailer, behind said main platform **1.**

When the trailer and the ride carried thereby have reached the intended site for the ride operation, the reverse manoeuver is performed for erecting the telescopic mast **14** and bring its various component elements to the position shown in FIG. **1;** then, the radial cantilever arms **25** can be locked in a plane perpendicular to that containing the telescopic mast **14,** as shown in FIG. **2;** during the ride operation the mast can be inclined to a certain extent, as shown in FIG. **4,** and also extended as shown in FIG. **5;** the auxiliary platform **19** may also be inclined as shown in FIG. **6.**

By combining all these possible inclinations of the telescopic mast, radial arms and auxiliary platform with the permissible rotational movements of the frame structure and auxiliary platform, which may take place at different speeds and in the same or opposite directions, it will readily occur to those conversant with the art that a wide range of thrill and excitment can be obtained for the passengers of the gondolas **26,** thus making the ride particularly attractive.

A modification may be brought to the means controlling the tilting or inclination of the main platform **1** by pivoting the cylinder **38** on one side to a pivot pin **39** of the trailer **4** and on the other side to a strut **40** extending under the platform in a plane at right angles thereto, and providing another cylinder **41** pivoted at one end to a pivot pin **42** carried by the rear portion **3** of the trailer and at the opposite end to a link **43** mounted to the pivot pin **2** of said platform. This assembly has a greater strength and the second cylinder **41** acts as a shock absorber (see FIGS. **8** and **9**).

Although the present invention has been described with reference to a specific form of embodiment and a specific modification brought thereto, it will readily occur to those conversant with the art that many modifications and changes may be brought to these structures without departing from the basic principles of the invention as set forth in the appended claims.

What is claimed is:

1. Amusement park ride comprising collapsible elements mounted on a trailer, said elements consisting of a main platform a vertical shaft extending centrally of said platform, a lower plate carried by said shaft, a toothed wheel rigid with said lower plate, power means for driving said toothed wheel, a substantially inverted-V shaped frame structure carried by said plate, a horizontal shaft carried by the upper portion of said frame structure, a telescopic mast normally vertically suspended from said horizontal shaft, means controlling the extension or retraction of the upper telescopic section thereof, an offset horizontal pivot pin carried by the top of said telescopic section, another, upper auxiliary platform pivotally mounted to said horizontal pivot pin means for controlling the inclination of said auxiliary platform in relation to said mast, a toothed ring carried by said upper auxiliary platform, power means for rotating said toothed ring, a normally vertical central shaft secured to said upper auxiliary platform, another plate slidably mounted to said vertical central shaft, vertical fluid actuated cylinders adapted to actuate said other plate toward and away from said upper auxiliary platform, a plurality of radial cantilever arms provided with gondolas suspended from their outer ends and pivoted near their inner ends to pivot pins carried by said upper auxiliary platform, and rollers rotatably mounted to the inner ends of said radial cantilever arms between said upper auxiliary platform and said other plate whereby actuation of said other plate controls the inclination of said radial arms, and said main platform pivoted to said trailer with a fluid-actuated cylinder for pivoting said main platform from a horizontal position supporting the frame structure in an upright position for use of the ride and to a vertical position for storage of the ride horizontally on said trailer.

2. Ride as set forth in claim **1,** wherein another fluid-acutated cylinder is pivoted at one end to the trailer and at the opposite end to a strut rigid with said lower plate to aid said main platform pivoting cyclinder.

3. Ride as set forth in claim **1,** wherein said gondolas are suspended from said radial cantilever arms by means of cranked levers fulcrumed to pivot pins in axial alignment with said radial arms, and links pivoted to other pivot pins perpendicular to said pins.

4. Ride as set forth in claim **3,** wherein hydraulic means are provided for locking said gondolas-supporting cranked levers.

5. Ride as set forth in claim **3,** wherein means are provided for damping out the oscillations of said gondola-supporting links.

6. Ride as set forth in claim **1,** wherein fluid actuated means controls the tilt of said mast with respect to said lower plate.

* * * * *