

I. D. PATTERSON.

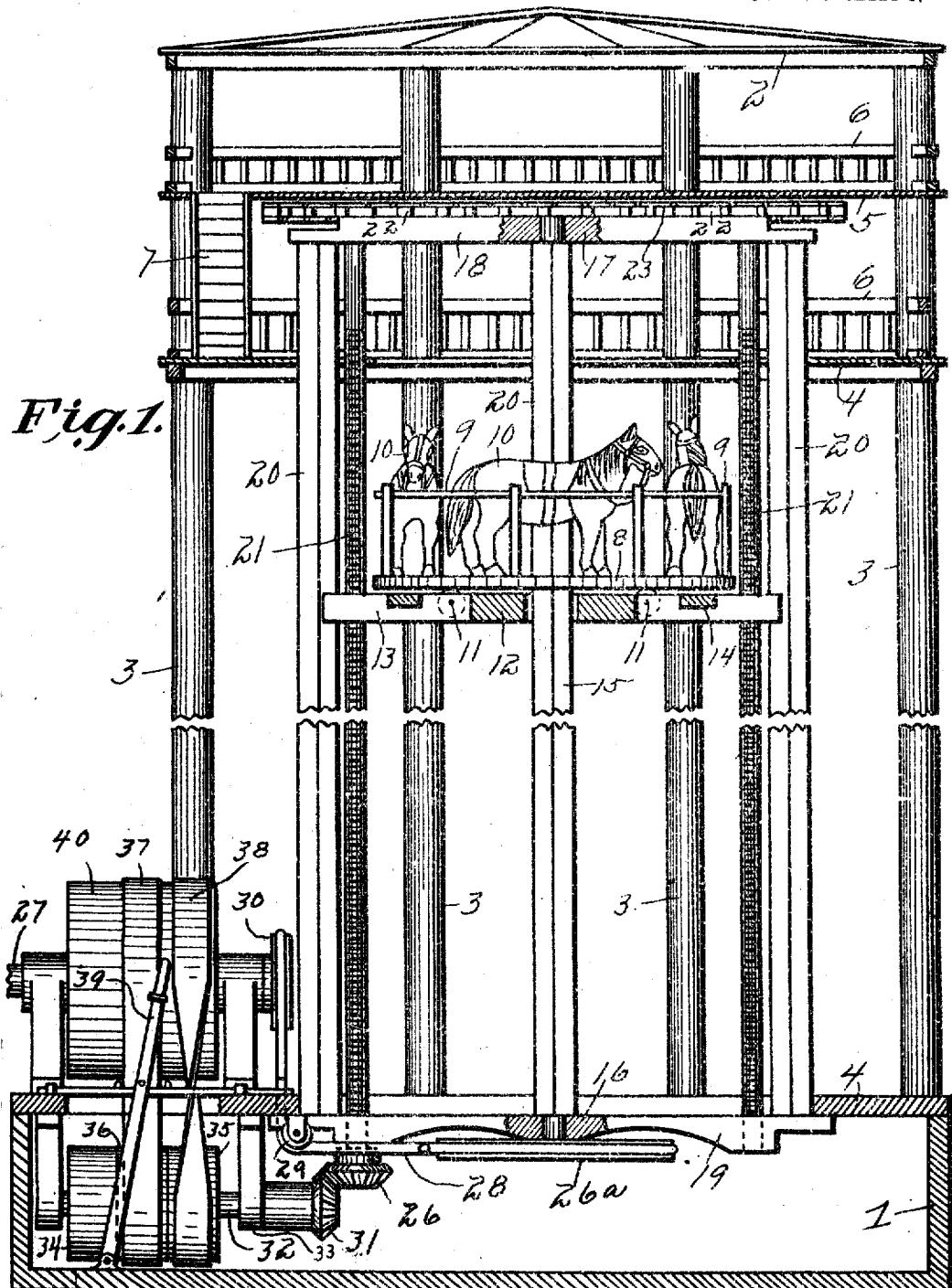
CAROUSEL.

APPLICATION FILED JAN. 22, 1907. RENEWED DEC. 5, 1908.

921,153.

Patented May 11, 1909.

3 SHEETS-SHEET 1.



WITNESSES.

Matthew Sibler
C. M. Thostfeld.

David D. Patterson INVENTOR.

My R. J. McCarty, Attorney

I. D. PATTERSON.

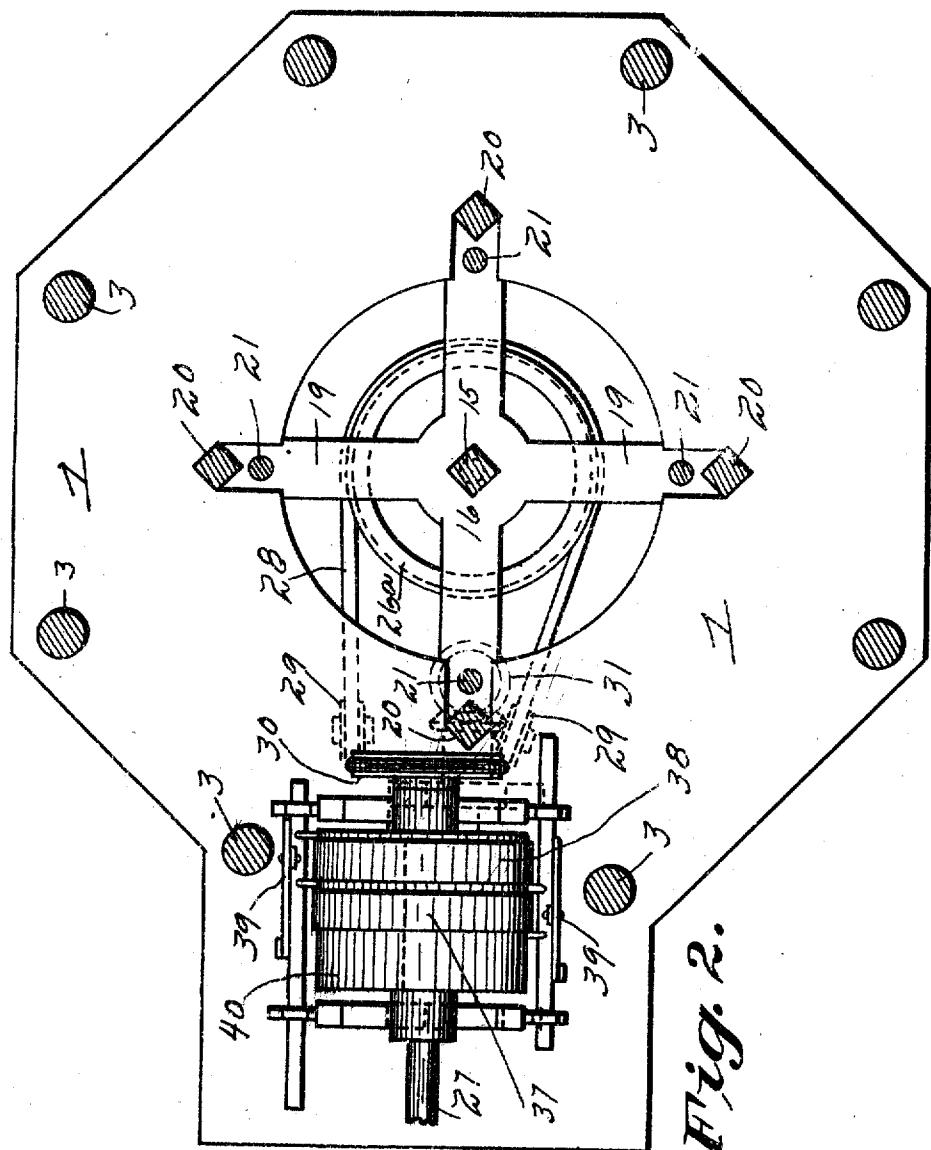
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3 SHEETS—SHEET 2.



Witnesses
Matthew Lubell.
G. M. Thostad.

Inventor
Isaiah D. Patterson
By
R. M. Carty
Attest
R. M. Carty
Attest

I. D. PATTERSON.

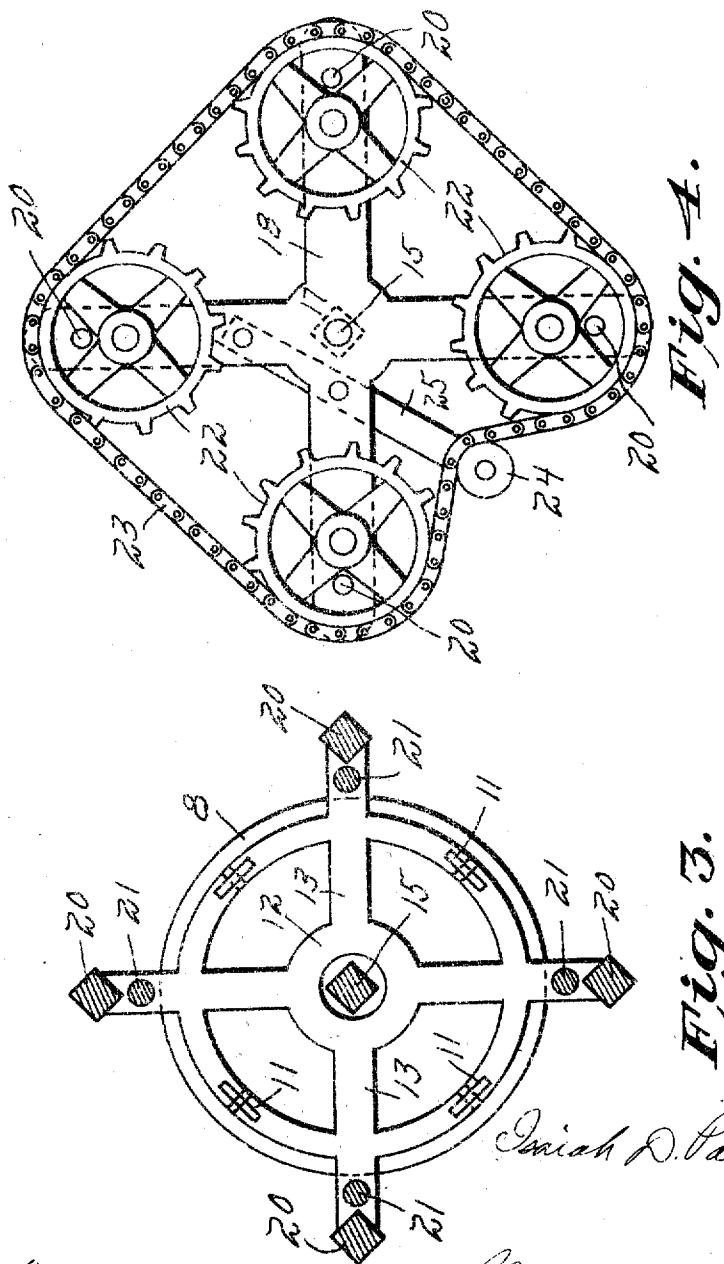
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3 SHEETS—SHEET 3.



Isiah D. Patterson.
Inventor

Witnesses
Matthew Subler.
C. M. Shostak.

By J. M. Carte,
his
Attorney

UNITED STATES PATENT OFFICE.

ISAIAH D. PATTERSON, OF DAYTON, OHIO.

CAROUSEL.

No. 921,158.

Specification of Letters Patent.

Patented May 11, 1909.

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To all whom it may concern:

Be it known that I, ISAIAH D. PATTERSON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Carousels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in pleasure machines, and comprises an observation tower having the characteristics hereinafter described and claimed.

The object of the invention is to provide an apparatus of the above type which has a combined rotary and reciprocating movement during its operations.

The apparatus is, as its name implies, intended to be located in parks, and in actual use is of a height approximately sixty feet; of course this may be varied if desired, but the object is to elevate the revolving platform gradually so that the occupants may be elevated while being carried around upon said platform.

Preceding a more detailed description of the invention, reference is made to the accompanying drawings, of which—

Figure 1, is a vertical sectional elevation of the apparatus. Fig. 2, is a horizontal sectional view of Fig. 1. Fig. 3, is a sectional view showing the circular track upon which the revolving platform rotates. Fig. 4, is a plan view of the upper driving wheels through which the reciprocating movement is imparted to the revolving table.

In a detail description of the invention, similar reference characters indicate corresponding parts.

The super-structure is supported upon a suitable base 1 which may be made of cement or other desirable material and in actual use may be of an area suitable for the purposes. This base 1 supports a roof 2 on a suitable number of columns 3 which extend from said base. The said columns are tied together at their upper ends by said roof 2 and by a lower platform 4 and an upper platform 5 onto either of which the occupants of the revolving platform may land;

these platforms being stationary and forming what may be termed roof gardens which are surrounded by railings 6. Access from the lower stationary platform to the upper stationary platform is had through a flight of stairs 7. The revolving platform is provided with a circular railing 9 and a suitable number of artificial animals 10, the whole being similar to the usual merry-go-rounds. This revolving platform 8 is provided on its lower side with a suitable circular track which engages or rests upon a suitable number of rollers 11, said rollers being mounted upon a reciprocating frame or spider having a hub 12 with arms 13 and circular connections 14 in which the rollers 11 are mounted. The frame consisting of the hub 12, the circular connection 14 and the arms 13 as before stated, has a reciprocating movement, and owing to the revolving platform 8 being supported thereon, the latter is also given such reciprocating movement while it is being rotated. The revolving platform 8 has sliding movement upon the central post 15, the latter passing through the axis of said revolving table, and passing loosely through the axis of the hub 12. The upper and lower ends of said central post 15 is journaled in the hubs 16 and 17 of upper and lower stationary spiders or frames 18 and 19. Extending between and uniting these spiders or frames 18 and 19 are a series of posts 20 which, together with the frames 18 and 19 constitute the inner stationary frame-work of the apparatus, and the posts or uprights 20 form guides for the reciprocating frame consisting of the hub 12 and arms 13 before referred to.

21 designates a suitable number of upright screws the ends of which are smooth and are journaled in the upper and lower stationary frames 18 and 19; these screws pass through screw-threaded apertures in the arms 13 of the reciprocating frame and said screws are rotated to impart the reciprocating movement to said frame, and therefrom to the revolving platform 8. The upper ends of said screws 21 are provided with sprocket wheels 22 which lie above the upper stationary frame 18 and are connected by means of a sprocket chain 23; the chain 23 is given the proper tension through an idler or roller 24 which is mounted upon a stationary arm 25 made fast to the upper frame 18. One of the screws is driven from below through a bevel pinion 26 and thus uniform movement is im-

parted to the remaining screws through the chain and chain wheels referred to. The central shaft or post 15 through which the revolving platform 8 is rotated has upon its lower end a band pulley 26* which is connected to the main power shaft 27 through a belt 28 which passes around a guide pulley 29 and thence over a driving pulley 30 on said shaft 27.

It will be seen that the rotary movement is imparted to the table or platform 8 constantly when power is introduced to the main shaft 27, said power being furnished from any suitable medium. The bevel gear 26 through which movement is imparted to one of the screws 21, is in mesh with a similar gear wheel 31 upon an auxiliary shaft 32 supported in hangers 33; this auxiliary shaft 32 has two loose running pulleys 34 and 35, and an intermediate driving pulley 36 which is adapted to rotate or drive the shaft 32 in reverse directions through one or the other of the belts 37 or 38, the latter belt being twisted to impart a movement the reverse of that imparted through the belt 37. These belts are shifted in and out of gear with the driving pulley 36 by shifting levers 39. It will thus be seen that, in the rotation of the screws 21 in either direction through the belts 37 and 38 surrounding the main driving pulley 40, the frame 12—14 is given reciprocating movement simultaneously with the rotation of the platform 8. The uprights 20 and screws 21 are suspended from the upper frame 17—18, so that the weight of the entire inner frame is not borne at the base of the apparatus.

I claim:

1. In an apparatus of the character specified, the combination with an upright frame of a stationary character, perpendicularly-disposed screws mounted within said frame, a reciprocating frame engaging said screws, a revolving platform supported by the reciprocating frame, means for revolving said platform simultaneously with the reciprocating movements of the frame supporting it, and means for simultaneously rotating all the screws to impart reciprocating movement to said reciprocating frame.
2. In an apparatus of the type specified, a rotatable platform, an axial shaft upon which said platform slides, a reciprocating frame supporting said platform, rollers interposed between said frame and said platform, upright guides for said reciprocating frame, means for imparting reciprocating movement

to said frame, and means for simultaneously rotating the axial shaft of the rotatable platform.

3. In an apparatus of the type specified, a rotatable platform, a reciprocating frame supporting said platform, rollers interposed between the platform and the frame, an upright shaft projecting through said frame and said platform and upon which the platform slides, driving screws penetrating said frame, upright marginal guide rods for said reciprocating frame, and upper and lower frames connected rigidly to said guide rods, and forming bearings for the upright shaft of the rotatable platform, and the screws through which movement is imparted to the reciprocating frame.

4. In an apparatus of the type specified, an outer stationary frame-work having an upper stationary platform, an inner stationary frame, a rotatable platform, a reciprocating frame supporting said rotatable platform and guided by the upright portions of the inner stationary frame, an upright rod projecting loosely through the axis of the reciprocating frame and upon which the rotatable platform slides, upright screws adapted to give the reciprocating frame such movement, said upright rod and screws having their ends journaled in the upper and lower parts of the inner stationary frame, substantially as specified.

5. An outer stationary frame having a platform in its upper end, an inner stationary frame, a rotatable platform within said inner frame, a reciprocating frame supporting said rotatable platform and guided by said inner stationary frame, an upright shaft journaled in the upper and lower portions of said inner frame and adapted to impart rotary movement to said rotary platform, upright screws journaled in the upper and lower portions of said inner frame and adapted to impart reciprocating movement simultaneously to the rotating platform and its supporting frame, the upper ends of the screws being connected by chain gearing, and the lower end of one of the screws and the central shaft being geared to the same driving medium.

In testimony whereof I affix my signature, in presence of two witnesses.

ISAIAH D. PATTERSON.

Witnesses:

C. M. THEOBALD,
R. J. McCARTY.