No. 863,362. PATENTED AUG. 13, 1907.

F. V. CROSHIER.

AMUSEMENT DEVICE.

APPLICATION FILED JULY 19, 1906.

2 SHEETS—SHEET 1.

Fig 1

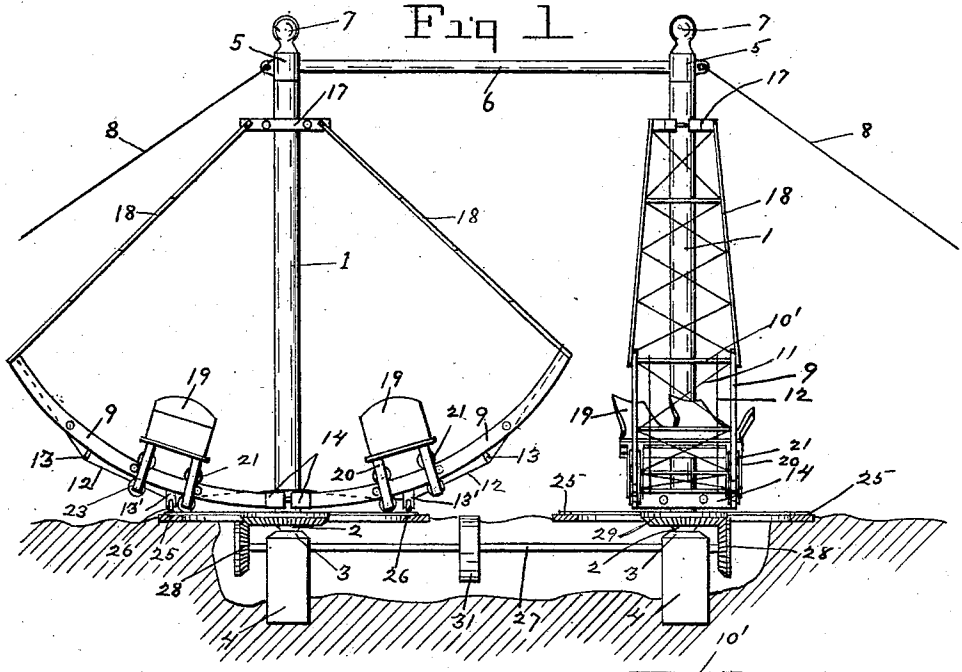
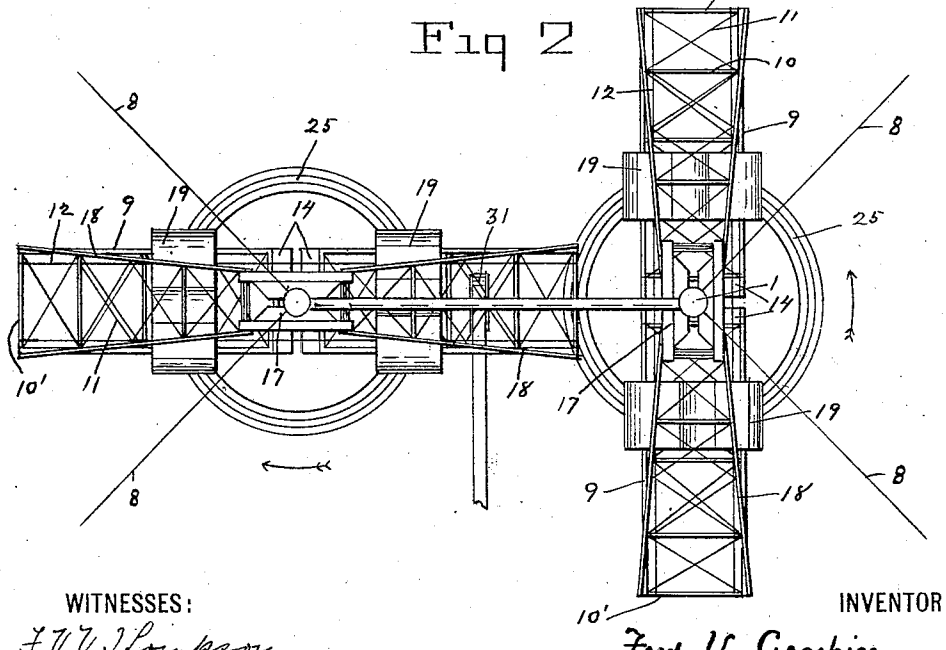


Fig 2



WITNESSES:

F. V. Thompson

H. L. Sall

INVENTOR

Fred V. Croshier.

BY

John J. Thompson

ATTORNEY

No. 863,362. PATENTED AUG. 13, 1907.

F. V. CROSHIER.

AMUSEMENT DEVICE.

APPLICATION FILED JULY 19, 1906.

2 SHEETS—SHEET 2.

Fig 3

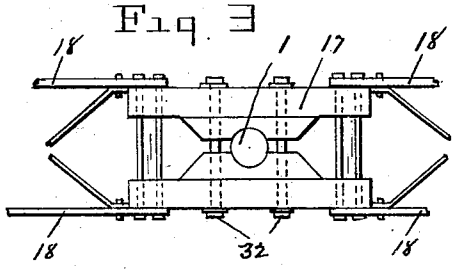


Fig 4

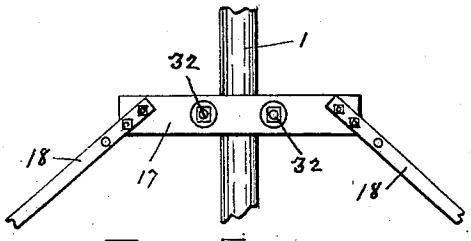


Fig 5

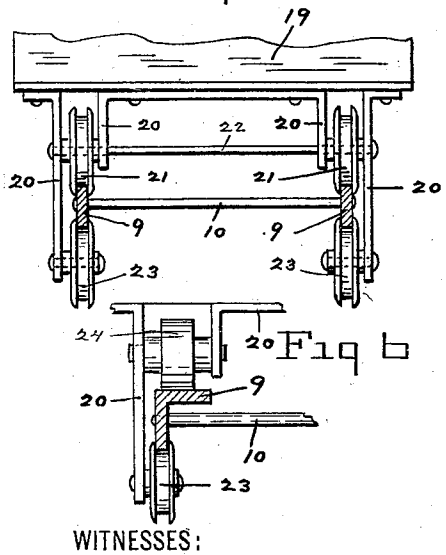


Fig 6

Fig 7

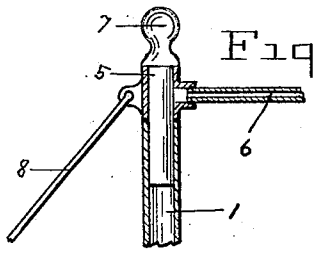


Fig 8

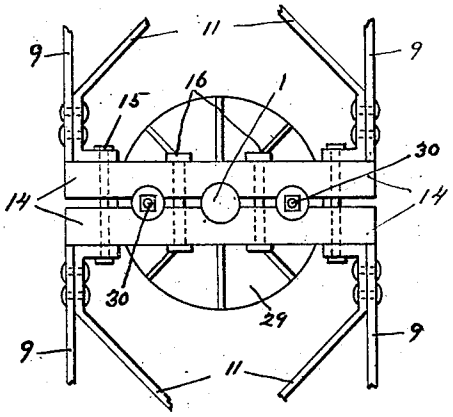
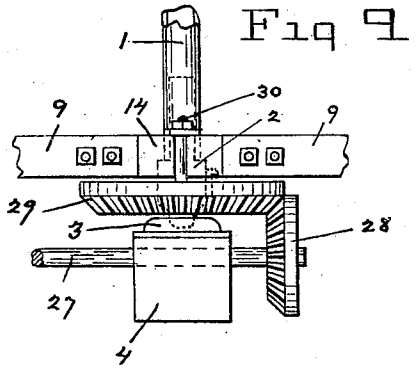


Fig 9



WITNESSES:

F. V. Thompson

H. J. Salt

INVENTOR

Fred V. Croshier

BY

John J. Thompson

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK V. CROSHIER, OF ARLINGTON, NEW YORK.

AMUSEMENT DEVICE.

No. 863,362. Specification of Letters Patent. Patented Aug. 13, 1907.

Application filed July 19, 1906. Serial No. 326,818.

To all whom it may concern:

Be it known that I, FREDERICK V. CROSHIER, a citizen of the United States of America, residing at Arlington, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

The object of this invention is to provide an improved amusement device of the class known as "merry-go-rounds" or "circular swings".

My invention as herein described and illustrated, shows the combination of only two swings of two radial arms each, while my invention may consist of a number of swings mounted in a suitable manner, and also the swings may have more than two radial arms, as it will be seen that they rotate in the same manner as a pair of gears, the arms taking the place of the teeth, so that by placing the center-poles of the swings at the proper distance apart, and adjusting the rotating mechanism, so that the arms of one swing will come between the arms of the other swing, they may have a greater number of arms than shown in this specification, and I do not confine myself to any stated number.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part and in which the separate parts of the improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1, is an elevation, showing two swings of two arms each, and the manner in which they are operated. Fig. 2, is a plan view of the same. Fig. 3 is a plan view of the clamp which holds the tops of the supporting braces to the center-pole or shaft. Fig. 4, is an elevation of the same. Fig. 5, is an end view of the guide and safety wheels of a car, showing the guide track in section, and the manner in which the car is mounted upon said track. Fig. 6, shows the manner of mounting the car upon another form of track. Fig. 7, shows the top of a center-pole in section, showing the manner in which the connecting bar is secured to said pole, and also the guy ropes. Fig. 8, is a plan view of the bottom or track clamp, and shows the manner of securing the same to the center-pole. Fig. 9, shows in detail the operating mechanism and the manner of mounting the center-pole upon the base-blocks.

In the drawings:—1, designates the center-pole or shaft of pipe or other suitable material, having secured to its lower ends the bearing-plugs 2, (Fig. 9.) which are formed with a spherical projection at the lower end, with which to engage the socket in the base-plate 3, which is secured to the base-block 4. Said bearing-plug 2, and base-plate 3, form a ball and socket bearing upon which the swing revolves. The tops of the center-pole 1, are secured to the ends of the brace-bar 6, by the plugs 7, which are passed through the brace-head 5, and into the tops of said poles, thus securing them in a vertical position by the action of said brace-bar 6, and the guy ropes 8, which are secured to suitable anchors upon the ground. In this manner the center-pole will freely rotate. The curved-tracks 9, are held in a parallel position by the rods 10, and the braces 11, and said tracks may be of flat material as shown in Figs. 1, 2, 5, 8, and 9, or of angle form as shown in Fig. 6. The tracks are further strengthened by the truss-rods 12, running from the brace-rods 11′ under the blocks 13 and 13′ and over the track-clamp 14. To the lower or inner ends of said tracks 9, is secured the center-clamp 14, by the bolts 15, thus holding the tracks end to end and also securely to the center-pole 1, near its lower end by the bolts 16. Near the top of the center-pole 1, is secured the clamp 17, by the bolts 32, in a rigid manner, while to the ends of said clamp 17, is bolted the upper ends of the trusses 18, which are secured to the outer or upper ends of the tracks 9, and which serve to support them.

The cars 19, of any suitable form are securely fastened to trucks formed by the braces 20, between which are mounted the guide-wheels 21, which are grooved to receive the track, and which are held by the axle 22, revolving in bearings in said braces 20, and which also support the safety-wheels 23. In Fig. 6, the guide-wheel 24, is used owing to the use of a flat track formed by the side of the angle shaped track, while the same grooved safety-wheel 23, may be used.

Concentric with the center-pole 1, is mounted upon the ground or floor the circular track 25, upon which the wheels 26, mounted in the truss blocks 13′ travel and thus take any extra weight or strain from the tracks 9.

The base-block 4, are pierced near the top by the driving-shaft 27, to each end of which is rigidly secured the gear 28, which drives the large gear 29, which is fitted over the bearing-plug 2, to which it is keyed, and also held by the bolts 30, which pass up through the clamp 14. Mounted upon the shaft 27, is the driving pulley 31, which transmits power from any suitable motor or engine.

The operation of the invention is as follows: In the form of design as illustrated showing two swings of two tracks each, one swing is set at right angles to the other and by the arrangement of the gears 28, the swings rotate in opposite directions. The cars having a perfectly free motion upon the tracks will descend the curve of the tracks and remain at the lowest point near the center-pole while the swing is at rest, or until the swing has gained sufficient speed for the centrifugal force to throw them from the center, thus sending the cars outward and upward along the tracks 9, while the safety wheels 23, engaging the lower side of the tracks prevent the car from leaving the track in any manner, and render the device perfectly safe. As the speed of the swing decreases the cars will descend

the tracks toward the center-pole and come to rest. It will thus be seen that the cars have two motions, one circular around the pole, while at the same time they are ascending and increasing their radius from the pole until they reach the outer end of the tracks.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In an apparatus of the class described, a vertical rotating center-pole, having rigidly secured near its lower end a clamp, from which extend braces and trussed parallel outwardly and upwardly curved tracks, which are provided with braces extending upward from their outer ends and securely fastened to said center pole near its upper end by a clamp, substantially as described.

2. In an apparatus of the class described, a vertical rotating shaft, having arms formed of parallel upwardly and outwardly curved tracks, upon which is supported rolling cars, means for rotating said arms with the center shaft, substantially as described.

3. In an apparatus of the class described, having one or two vertical center-poles or shafts, rotating in end bearings and held in a vertical position by braces and guy ropes, and supporting radial parallel outwardly and upwardly curved tracks upon which are mounted rolling cars, held in place by guide wheels bearing upon said tracks, and by grooved safety wheels extending below said guide wheels and engaging the under edge of said tracks, substantially as described.

4. A center pole, a circular track concentric with the center pole, radial parallel outwardly and upwardly curved car carrying tracks attached to the pole, and rollers mounted in bearing blocks secured to the under side of the radial tracks and traveling upon the circular track.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED. V. CROSHIER.

Witnesses:
ELMER E. ROSE,
J. S. J. DONNELLY.