J. E. McREYNOLDS.

AMUSEMENT APPARATUS.

APPLICATION FILED JUNE 14, 1911.

1,030,316.

Patented June 25, 1912.

3 SHEETS-SHEET 1.

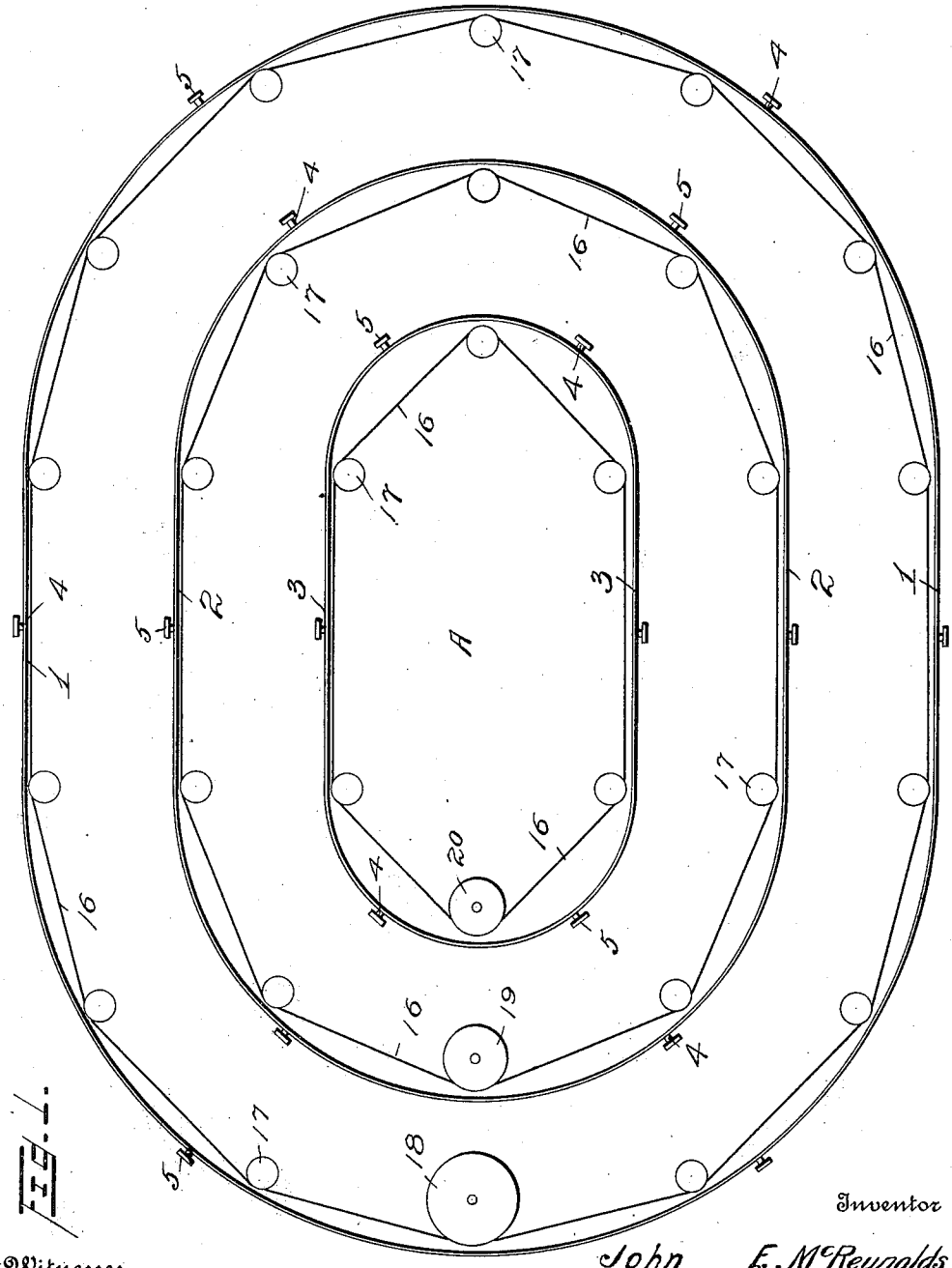

FIG. 1.

Witnesses

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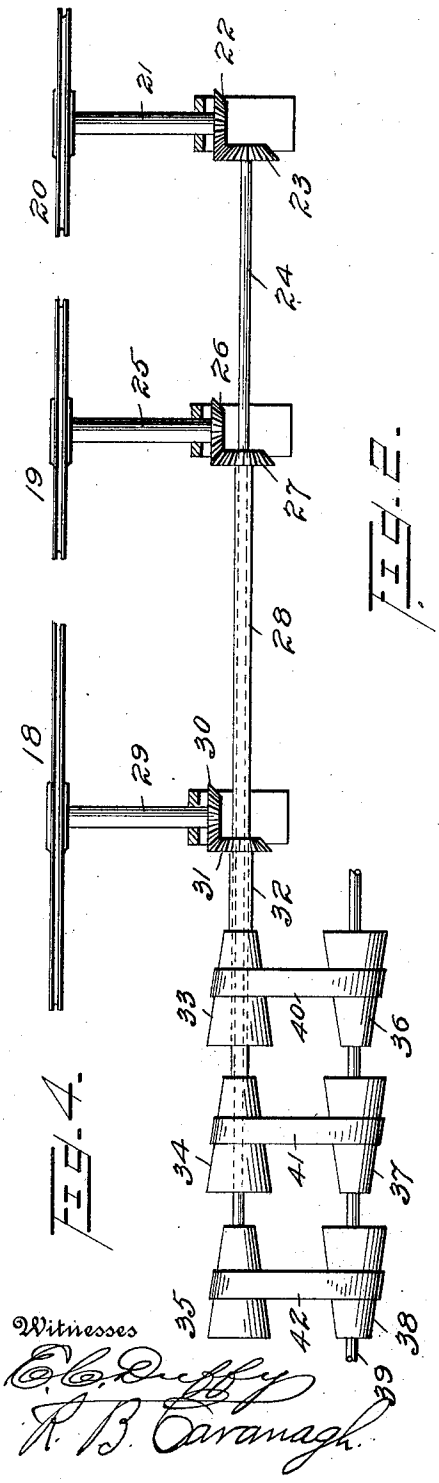

FIG. 4.

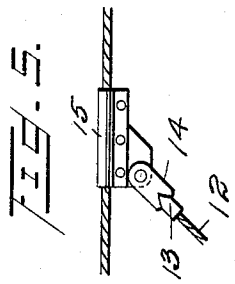

FIG. 5.

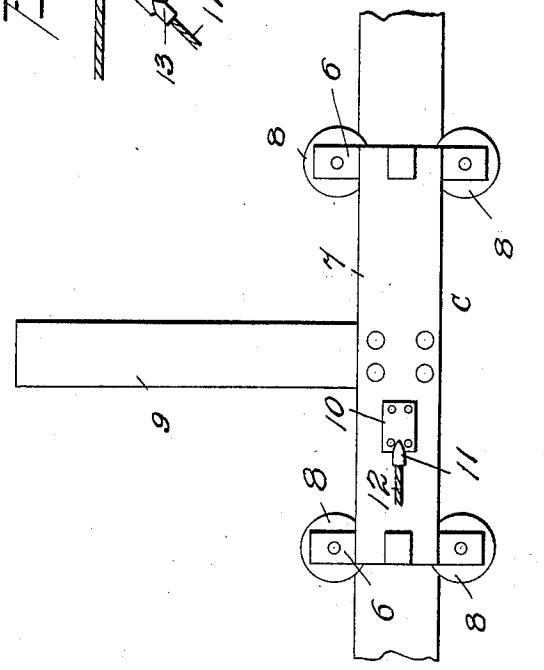

FIG. 6.

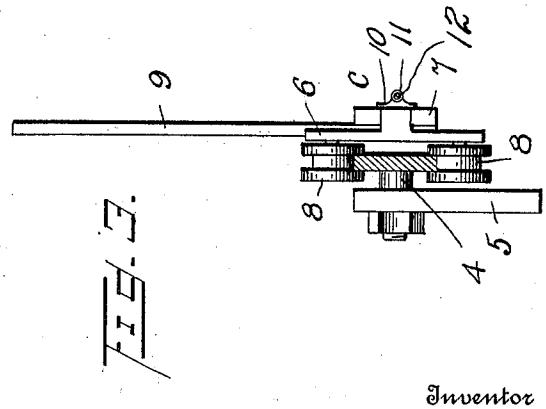

FIG. 7.

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3 SHEETS—SHEET 3.

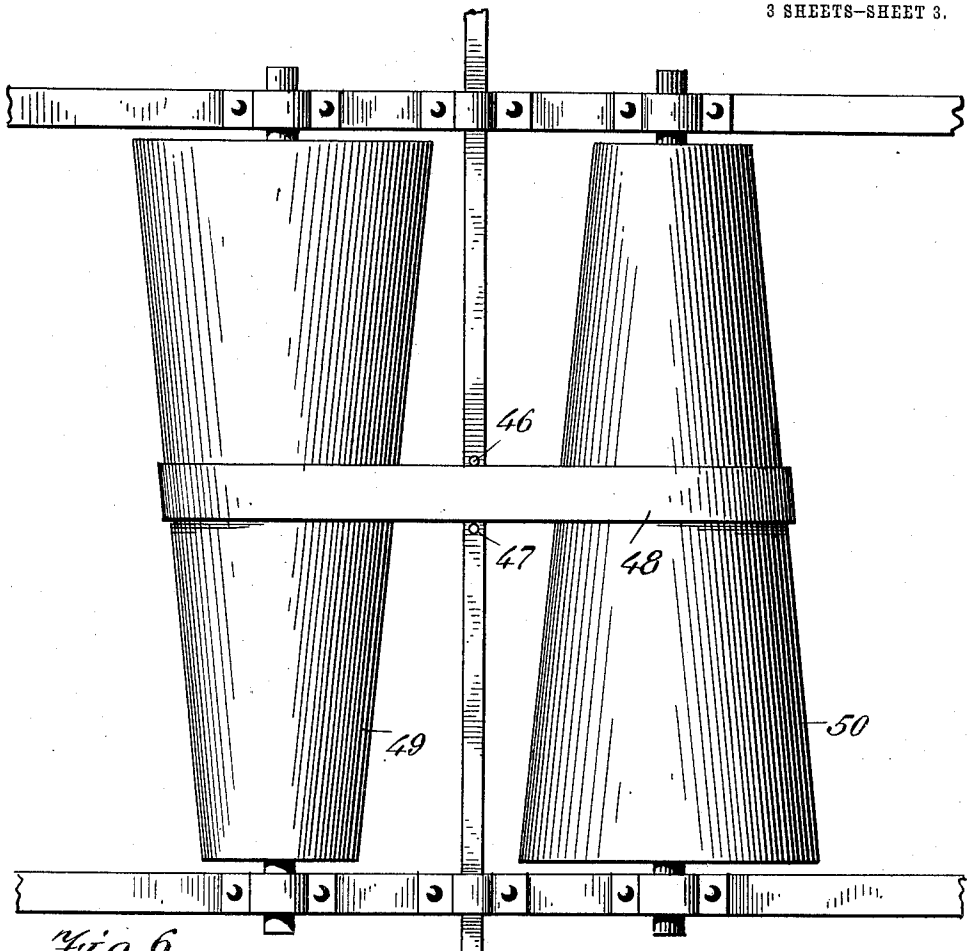

Fig. 6.

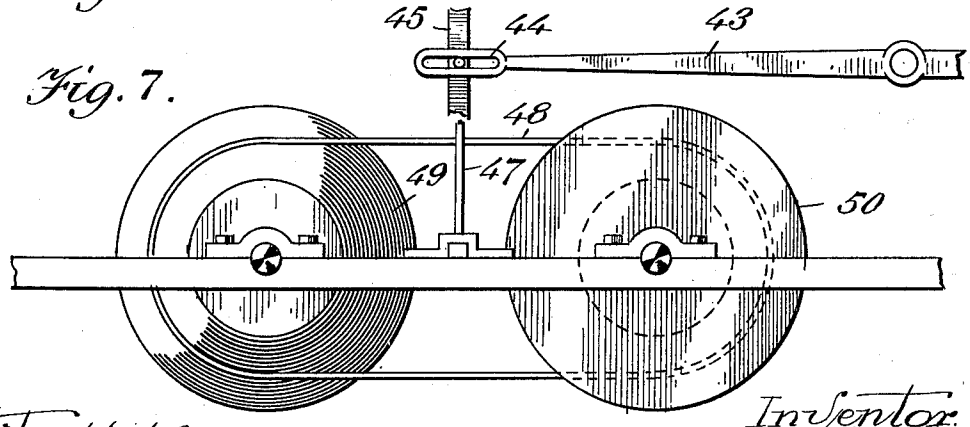

Fig. 7.

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AMUSEMENT APPARATUS.

1,030,316. Specification of Letters Patent. Patented June 25, 1912.

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To all whom it may concern:

Be it known that I, JOHN E. McREYNOLDS, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented new and useful Improvements in Amusement Apparatus, of which the following is a specification.

This invention relates to certain novel and useful improvements in amusement apparatus, and has particular application to that type of apparatus wherein a number of figures representing horses or other animals, or, if desired, objects in the nature of cars, chariots or the like, are driven around a mechanical race-course, thereby affording amusement, entertainment and excitement to those engaged in using the apparatus.

In carrying out my invention it is my purpose to provide an amusement apparatus of the character described wherein each of the figures, cars, or other objects may be driven at a predetermined speed at the will of the operator or attendant, so that when the apparatus is in operation he has complete control of the speed of the figures, thereby enabling him to make the race as close and exciting as he may desire.

Still a further object of my invention is to provide a novel means of connecting the figures or objects to the traveling or driving cable so that all curves in the track may be taken with ease, smoothness and safety.

Another purpose of my invention is to provide a novel arrangement of the various shafts for actuating the drive wheel of the traveling cables.

With the above recited objects and others of a similar nature in view, my invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings: Figure 1 is a plan view of an apparatus embodying my invention, the cables and guide sheaves therefor being shown in dotted lines. Fig. 2 is a side view of the carriage traveling along the trackway. Fig. 3 is an end view of the same, the track being shown in section. Fig. 4 is a plan view showing the arrangement of the power transmitting mechanism including the drive shafts, cone pulleys, gearing and cable driving wheels. Fig. 5 is a detail view showing the flexible connection of the carriage and cable. Fig. 6 is a top plan view of the cone pulleys. Fig. 7 is a view in side elevation of the mechanism for shifting the belt to vary the speed of the cone pulleys.

Referring now to the accompanying drawing in detail, the letter A indicates as an entirety the platform or frame of the race track which is of any preferred shape and dimensions, and upon this platform is supported a number of approximately elliptical trackways indicated at 1, 2, and 3 arranged one within the other and each trackway is preferably formed of a band of iron of suitable thickness, height and strength, such tracks being bolted or otherwise fastened as at 4 to uprights 5 as is shown in Fig. 3, so that the track is supported above the platform. Adapted to travel on this trackway is the carriage C comprising a frame formed of the end members 6—6 and the horizontal connecting bar 7. The members 6 project beyond the end of the bar 7, and carry the grooved wheels 8, arranged in pairs so that while one pair rides on the top edge of the track the other bears against the under edge thereof. Extending upwardly from the bar 7 is a suitable support 9 for an object or figure such as an animal or car (not shown). Secured to one side of the bar 7, at any suitable point is a plate 10 having a socket 11 in which is secured one end of the relatively short flexible cable 12, the opposite end of said cable being secured in the socket 13 of the link 14 pivotally connected to the sleeve 15 carried by one of the drive cables. By reference to the drawings it will be seen that there is a drive cable 16 for each track, in the present instance three in number, each endless cable leading over guide sheaves 17 suitably arranged at the platform and grooved in such manner that the sleeves 15 of the carriage cable connections will ride easily and smoothly over and past the sheaves. It will, of course, be understood that there is a cable connection and sleeve for each carriage. In order to drive the cables shown in Fig. 1, I employ the grooved drive wheels 18, 19, and 20, engaging with the outer intermediate and inner cables respectively. The drive wheel 20 is carried by the shaft 21 having the bevel gear 22 meshing with the bevel gear 23 at the end of the solid shaft 24. Similarly the wheel 19 is driven through shaft 25, and bevel gears 26 and 27, the latter on the end of the tubular shaft 28 through which passes the solid shaft 24. The outer wheel 18 is in turn driven through shaft 29 carrying bevel gear

30 meshing with bevel gear 31 in the end of the tubular shaft 32 which envelops the tubular shaft 28 and the solid shaft 24.

The ends of the shaft 24 extend beyond the ends of the shaft 28 and similarly the latter is longer than the outer tubular shaft 32. These shafts 24, 28 and 32 are provided with cone pulleys 33, 34 and 35, respectively arranged in the parallelism with the oppositely disposed cone pulleys 36, 37 and 38 on the power shaft 39, receiving power from a suitable source. These sets of pulleys 33, 36, 34, 37, and 35, 38, are connected in driving engagement by the bolts 40, 41 and 42, which may be shifted by any suitable belt shifting means, to vary the speed of revolution of the drive shafts of the cables 16 and consequently varying the speed at which the figures or objects connected to the cables travel.

In Figs. 7 and 8, I have shown one arrangement for varying the speed of drive of the pulleys. In said figures, the numeral 43 indicates an operating lever terminating in a link 44 engaging with the belt shifting rod 45 carrying the pins 46 and 47. The numeral 48 indicates the drive belt engaging the two oppositely disposed pulleys 49 and 50, which, as will be noted from Fig. 7 are of the ordinary cone form so that as the belt is shifted through the medium of the rod 43, the driving speed of the pulleys and consequently the drive shaft will be varied to conform to the requirements of the apparatus.

From the above description taken in connection with the accompanying drawings, the construction and operation of my improved amusement apparatus will be readily apparent. The figures or cars which are supported on the standards 9 are thus carried by the carriages which travel on the trackways and are in connection with the endless traveling cables through the short flexible cables 12. Motion is imparted to the power shaft 39 and thence through the cone pulleys to the telescoping shafts 24, 28 and 32 through which such motion is transmitted through the respective bevel gears and short stud shafts to the drive wheels 18, 19 and 20 and these being in engagement with the endless cables, drive the latter. When it is desired to change the speed of travel of one of the cables it is only necessary to shift the belts of the cone pulleys thereby changing the speed of revolution of the driving shafts 24, 28 and 32. It will be seen that I have provided a compact, durable and entertaining form of amusement device, and one wherein the objects or figures carrying the passengers will travel easily, smoothly and safely over the trackway, the speed of travel of any of said objects or figures being under the control and regulation of the operator or attendant.

While I have herein shown and described one embodiment of my invention by way of illustration, I wish it to be understood that I do not limit myself to all the precise details of construction herein set forth by way of illustration, as modification and variation may be made without departing from the spirit of the invention or exceeding the scope of the claims.

What is claimed as new is:

1. An amusement apparatus comprising a platform, a trackway thereon, an endless cable traveling adjacent to said trackway, guide sheaves for said cable, a drive wheel engaging with the cable, a shaft connected to said wheel, a second shaft, gearing between the first-named shaft and the second shaft, means for varying the speed of the revolution of the shaft, a carriage traveling on the trackway, and connections between said carriage and cable.

2. An amusement apparatus comprising a platform, a plurality of trackways arranged thereon and located one within the other, a traveling cable for each of said trackways, guide sheaves for the cables, carriages traveling on said trackways, and flexible connections with the carriages and the cables, each connection comprising a socket member secured to the carriage and sleeve of the cable and a short cable between the socket and sleeve, a support carried by the carriage, means for driving the endless cables and means for varying the speed of the drive of the cables.

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

JOHN E. McREYNOLDS.

Witnesses:
J. STERLING WHEELER,
HARRY RATHGEB.