R. STEEL.

CARROUSEL. No. 344,753. Patented June 29, 1886. B B Inventor.
Robert Steel.
For Thomas f. Bewley. Att 4 Witnesses J.M. Bewley. C.a. Gurns

## United States Patent

## ROBERT STEEL, OF PHILADELPHIA, PENNSYLVANIA.

## CARROUSEL.

SPECIFICATION forming part of Letters Patent No. 344,753, dated June 29, 1886.

Application filed November 16, 1885. Serial No. 183,025. (No model.)

To all whom it may concern:

Be it known that I, ROBERT STEEL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State 5 of Pennsylvania, have invented certain new and useful Improvements in Carrousels, of which the following is a specification.

Heretofore carrousels differing from each other only in operating mechanism have been 10 constructed to revolve in a circle around a fixed center, frequently at a high rate of speed, which has a tendency to create a feeling of giddiness and nausea to occupants and riders.

The object of my invention is to overcome 15 the difficulties experienced, which I do by constructing the base of the carrousel oblong, or in the form of a parallelogram, and revolving the carriages contained thereon in a channel whose sides are parallel with the sides of 20 the base, and whose ends form continuous curves which connect the sides of said channel, suitable operating mechanism being provided for revolving the carriages.

My invention relates to an improvement in 25 carrousels, in which carriages, sleighs, and figures of animals are placed upon separate platforms, each having an axle and pair of wheels situated on the under side at the center thereof. Said wheels rotate, and are caused to carry 30 with them their connected platforms within a channel formed between protecting guides, which are parallel on the sides of the base, and curved on their ends, by which means a continuous channel is formed, whereby a con-35 stant circuit of the carriages may be maintained through the attachment of one of the series of platforms by a chain to an endless belt passing around band-wheels, to which motive power is imparted, as more fully here-40 inafter described.

In the accompanying drawings, which make a part of this specification, Figure 1 is a plan view of my improved carousel. Fig. 2 is a side elevation of the same.

Like letters of reference in both figures in-

dicate the same parts.

A is the oblong permanent base or floor, which is sunken beneath the surface of the ground designed for the use of the apparatus. 50 B B are metallic guides attached thereto, that project upward at right angles to said base.

C  $C^{\prime}$  are band-wheels, around which the endless belt D passes. These wheels rotate upon their shafts or stud-pins a a', the lower ends of which have their bearings in the permanent 55 base A. The wheel C is also a crown-wheel, having a series of teeth upon the upper surface of its rim, into which the teeth of the pinion  $C^2$  mesh. This pinion is fast upon and revolves with the stud-shaft  $a^2$ , supported 60 in the bearing E. Motion is imparted to this shaft by means of the handle c on the crank F upon the end of the shaft.

e are friction-rollers, secured upon the floor or base A in such position that the lower sur- 65 faces of the rims of the wheels C C' rotate thereon and preserve the equilibrium of the same, taking strain off of their center-pins a a'.

G represents platforms that overlap each other at their ends, and are connected togeth- 70 er by means of the swivel-pins d. They are each provided with an axle, f, and pair of wheels gg on their under surfaces exactly central longitudinally, which carry said platforms and their carriages around in the chan-75 nel J between the guides B B. One of these platforms is connected to the belt D by means of the chain h.

The operation is as follows: Motive power may be communicated to the wheels by any 80 known method. In the present instance the illustrations show the handle c on the crank E, which rotates the pinion C2, the teeth of which mesh into those of the wheel C, the belt communicating motion to the wheel C'. The 85 platforms G, being attached to the outer surface of the belt D by the chain h, are also caused to move, their wheels g traversing in the channel J between the guides B. By means of the swivel-connection of the plat- 9c forms G by the pins d, the wheels g being central longitudinally, the curves of the channel are turned easily.

It is designed in practice to construct the carrousels some four hundred or five hundred 95 feet in length upon their sides, with a curved channel upon each end of the base, connecting the parallel channels. This form of construction gives greater ease to riders, and overcomes the tendency to giddiness experienced 100 in circular machines.

A supplemental platform may be con-

structed outside and upon a level with the carriage-platforms G, to inclose the mechanism of the apparatus, and to afford an easy means of access.

Sprocket-wheels with an endless chain may be used in lieu of the band wheels C and belt D.

Imitations of pairs of animals may precede each carriage or sleigh, occupying separate platforms.

o I claim as my invention and desire to secure

by Letters Patent-

1. In a carrousel, the platforms G, connected together by the pins d, and provided with axles f and wheels g, in combination with the channel J of the oblong base A, and revolved therein by suitable mechanism, substantially

as and for the purpose set forth.

2. A carrousel, constructed as described,

having platforms G, provided with axles f and wheels g, placed longitudinally in their 20 centers, in combination with chain h, belt D, and band-wheels C C', substantially as herein shown and described.

3. In a carrousel, the combination of the oblong base A, sunken beneath the surface of 25 the ground and provided with guides B, forming the channel J, with the platforms G, connected together by the pins d, and having axles f and wheels g', chain h, belt D, and band-wheels C C', rotated upon their axes by 30 suitable motive power, substantially as herein shown and described.

ROBERT STEEL.

Witnesses:

THOMAS J. BEWLEY, FRANK SCHMIDT.