

Nov. 18, 1924.

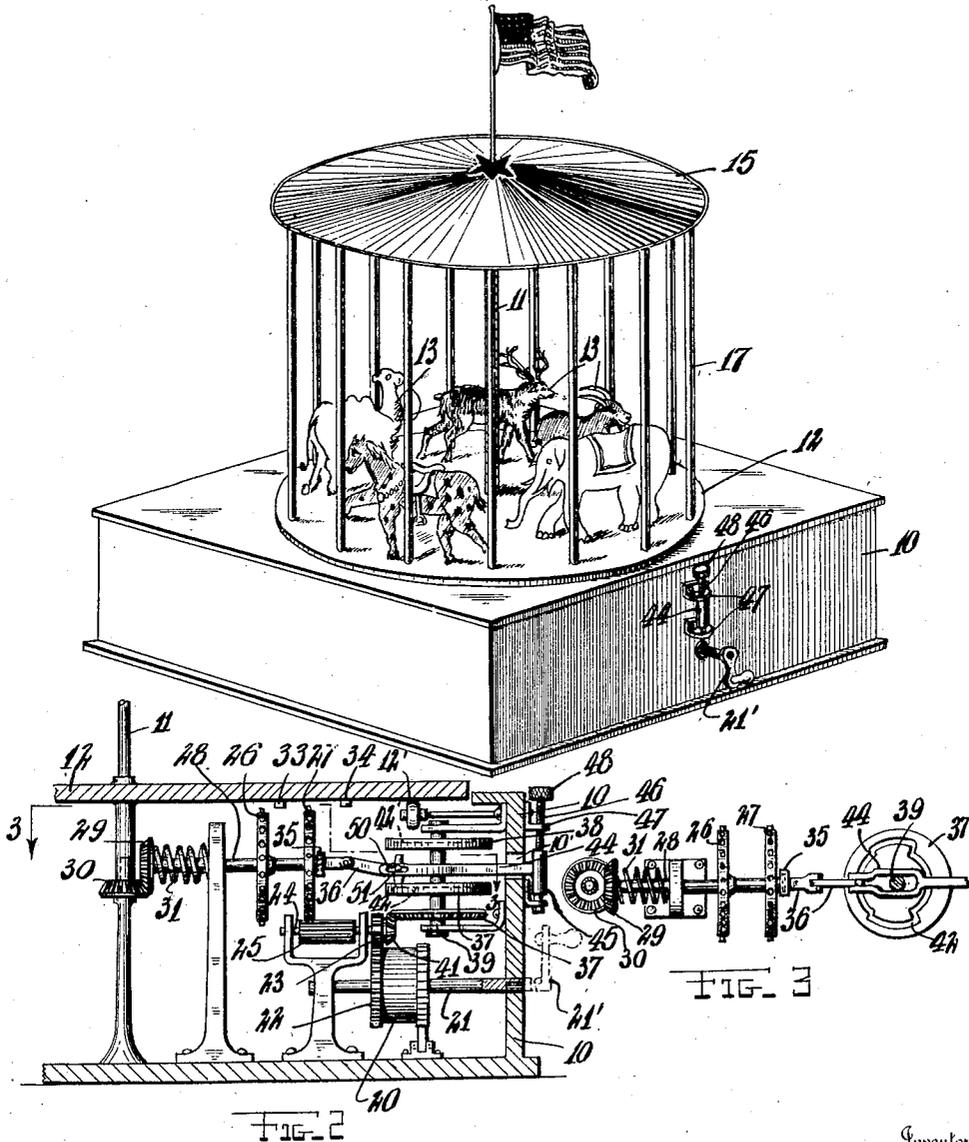
1,516,300

A. KOPER

MECHANICAL TOY

Filed Aug. 10, 1922

FIG. 1



Inventor

Adam Koper

By

*Julius Polack*

Attorney

Patented Nov. 18, 1924.

1,516,300

# UNITED STATES PATENT OFFICE.

ADAM KOPER, OF WYOMING, PENNSYLVANIA.

MECHANICAL TOY.

Application filed August 10, 1922. Serial No. 580,844.

*To all whom it may concern:*

Be it known that I, ADAM KOPER, a citizen of Poland, residing at Wyoming, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

This invention relates to mechanical toys, having particular reference to a toy arranged in simulation of a carousel, the invention having for an object the provision of a novel drive means for the rotating element for driving the latter at uneven speeds.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawings is a perspective view of a toy embodying the invention.

Fig. 2 is a fragmentary axial sectional view thereof.

Fig. 3 is a detail horizontal section on the line 3—3 of Fig. 2.

As here embodied my improved toy comprises a flat rectangular casing 10 in which a vertical shaft 11 is journaled, the shaft extending upward beyond the casing. Fixed to the shaft 11, on a level with the top of the casing, is a circular platform 12 on which are mounted a number of figures 13, this platform being here shown as on a level with the top of the casing 10 and accommodated in an opening in the latter, and may be supported at its edges by a series of rollers such as 12'. A hood 15 is fixed on the shaft 11 near the top thereof and forms a canopy for the figures 13, vertical rods 17 extending between the two platform and hood.

For rotating shaft 11 I provide a clock spring device 20 mounted in the usual manner on a horizontal shaft 21 in the casing 10 and adapted to be wound by a key 21' fitted to the projecting end of the shaft 21. Fixed to the usual barrel of the clock spring device is a gear 22 which meshes with a pinion 23 on a stub shaft 24 which also carries an elongated pinion 25.

This pinion 25 is adapted to mesh with either one of a pair of crown type gears 26, 27 fixed on a slidable shaft 28 on one end of which is a bevel gear 29 meshing with a like gear 30 on the vertical shaft 11. A

spring 31 urges the gear 29 into contact with the gear 30. Formed on the underside of the platform 12 are a pair of annular gear elements 33, 34 with which the respective gears 26, 27 may be brought into engagement. Swiveled upon the opposite end of shaft to that carrying gear 29 is a collar 35 to which is pivotally connected the foot of a T-bar 36 the cross piece of which extends vertically between a pair of disks 37, 38 fixed on a vertical shaft 39 driven by bevel gear and pinion members 40 and 41 from the shaft 24. These disks have cam grooves 42, 42' on their adjacent faces in which the respective arms of the T-bar may be engaged one at a time. The T-bar may be moved to engage either of the disks by means of an arm 44 projecting inwardly through a slot 10' in the casing 10 from a sleeve 45 threaded on a vertical screw 46 rotatably mounted in brackets 47 and having a head 48 on its upper end for turning purposes. The inner end of the arm 44 is forked to straddle the T-bar 36, the forked ends of the arm being longitudinally slotted as at 50, a pin 51 on the T-bar engaging in said slots.

The cam slots are so formed that engagement of the T-bar therewith will cause shaft to be shifted at different times during each revolution of disk to either have the bevel gears in mesh, rotating the disk at high speed, on the gear meshing with teeth, rotating disk at lesser speed, on the gear meshing with teeth rotating the disk at still lesser speed. The cam grooves in the two disks are differently arranged so that by shifting the cross piece of the T-bar from engagement with one disk to engagement with the other the movement of the main disk may be changed.

Having thus described my invention what I claim as new and desire to protect by Letters Patent of the United States is as follows:—

1. A toy carousel comprising a rotary platform, a number of figures mounted thereon, power mechanism for rotating the same, means providing a series of gear connections of different ratios adapted to selectively connect said power mechanism and rotary platform, and means actuated by said power mechanism for successively bringing said gear connections into operative engagement as the platform revolves.

2. A toy carousel comprising a rotary

platform, a number of figures mounted thereon, power mechanism for rotating the same, means providing a series of gear connections of different ratios adapted to selectively connect said power mechanism and rotary platform, and means actuated by said power mechanism for successively bringing said gear connections into operative engagement as the platform revolves, said last means including a slidable shaft carrying certain elements of the gear connections, and a rotary cam driven by said power mechanism and adapted to move said shaft slidably.

3. A toy carousel comprising a rotary platform, a number of figures mounted thereon, power mechanism for rotating the same, a series of gears on said rotary platform, a second series of gears adapted to individually engage said first series of gears, a slidable shaft on which said second series of gears is fixed, an operative connection including an elongated pinion between said

power mechanism and one of said second series of gears, a rotary cam driven by said power mechanism, and means for connecting said slidable shaft to said cam to be given a sliding movement thereby.

4. A toy carousel comprising a rotary platform, a number of figures mounted thereon, power mechanism for rotating the same, a series of gears on said rotary platform, a second series of gears adapted to individually engage said first series of gears, a slidable shaft on which said second series of gears is fixed, and operative connection including an elongated pinion between said power mechanism and one of said second series of gears, a pair of cams driven by said power mechanism, and means for connecting said slidable shaft to either of said cams to be given a sliding movement thereby.

In testimony whereof I have affixed my signature.

ADAM KOPER.