(No Model.)

F. J. & A. S. TOTTEN.

MECHANICAL TOY.

No. 369,623. Patented Sept. 6, 1887.

FIG. 1.

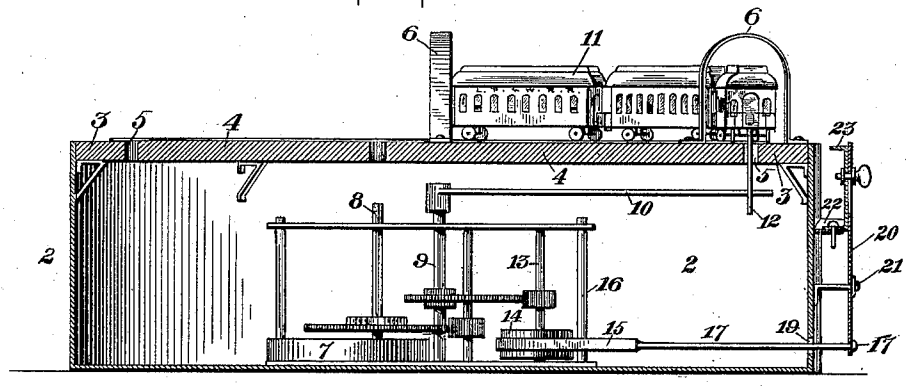


FIG. 2.

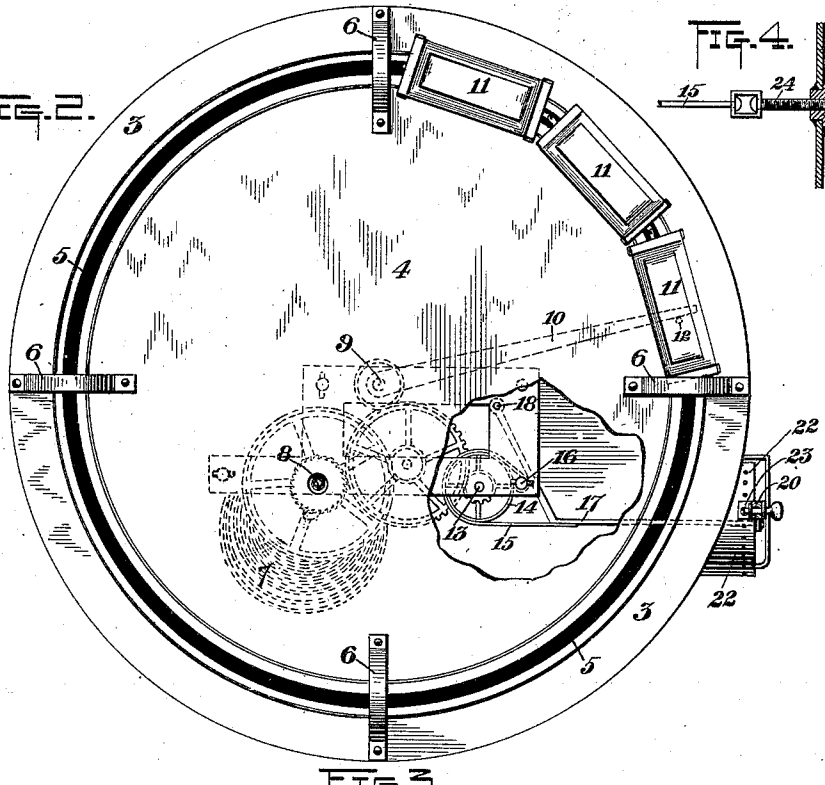
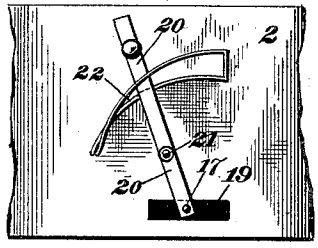


FIG. 4.

FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANCIS J. TOTTEN AND ALBERT S. TOTTEN, OF PITTSBURG, PENNSYLVANIA.

MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 369,623, dated September 6, 1887.

Application filed February 21, 1887. Serial No. 228,354. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS J. TOTTEN and ALBERT S. TOTTEN, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Mechanical Toys; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical central section of our improved toy. Fig. 2 is a plan view thereof, the top board of the toy being partly broken away to illustrate the clock-work mechanism. Fig. 3 is a side view of a part. Fig. 4 is a sectional view of a modified form of a part.

Like symbols of reference indicate like parts in each figure of the drawings.

In the drawings, 2 represents a box or case of cylindrical form. The top of the box is covered, there being an annular rim or cover-strip, 3, around the edge of the box, and a central circular cover, 4, somewhat separated from the ring 3, so as to leave an intervening circular slot, 5. The parts 3 and 4 are held together by arches 6, which span the slot 5. Inside the box 2 is clock-work mechanism comprising a spring, 7, a key-arbor, 8, and a vertical shaft, 9, which is driven by the spring. From the shaft 9 projects a horizontal arm, 10. A suitable toy, 11, mounted on wheels, is set on a circular track on top of the box 2, and is provided with a vertical stem, 12, which extends down through the slot 5 into the interior of the box. When the shaft 9 is driven by clock-work, it causes the radial arm 10 to move around in the box, and by engaging the rod 12 causes the toy-cars 11 to travel around on their track beneath the arches.

We are aware that we are not the first to invent a toy wherein a rotary clock-work-driven arm drives a vehicle around on a circular track, nor are we the first to use the arches 6, which serve to connect the parts of the top rigidly together without interfering with the slot.

Our invention consists of mechanism whereby the motion of the toy can be retarded or checked at will. Connected with the shaft 9 by suitable gear-wheels is a vertical shaft, 13, on which is a small drum, 14. A flexible band, 15, is secured at one end to a post, 16, and after enwrapping or partially enwrapping the drum 14 is attached to the free end of a lever, 17, which is fulcrumed at a point, 18. At the point of attachment with the band 15 the lever 17 is bent and extends to the outside of the box 2 through an elongated slot, 19. On the outside of the box is an upright lever, 20, which is pivoted at 21, and at its lower end is connected with the lever 17. By turning the lever 20 on its pivot 21 the lever 17 is turned on its pivot 18, and in this way the band 15 may be caused to exert a pressure of a greater or less degree upon the drum 14. By exerting a greater pressure on the drum the movement of the clock-work may be stopped altogether, and by a less pressure it may be retarded. In order to provide means for enabling the lever 20 to be locked at any position when the desired tension of the band is obtained, we provide the lever with a rack or quadrant, 22, making in it a series of holes. A longitudinally-movable latch, 23, is arranged on the side of the lever, and is movable to engage any one of the holes of the quadrant when the lever 20 is opposite thereto.

In Fig. 4 we show a modified form of device for braking the drum 14. Here the band 15 is attached to a screw-rod, 24, which extends through a screw-threaded bushing, 25, in the side of the box 2. By screwing the rod 24 in or out the tension of the band on the drum may be diminished or increased.

We claim—

1. The combination of a movable toy mounted on a circular track, stationary clock-work, a rotary arm driven by the clock-work and driving the toy, and braking mechanism bearing on the clock-work for adjustably retarding the motion thereof, substantially as and for the purposes described.

2. The combination of a movable toy mounted on a circular track, clock-work mechanism impelling the toy, the drum 14, connected with the clock-work, and the brake-band 15, enwrapping the drum, substantially as and for the purposes described.

3. The combination of a movable toy mounted on a circular track, clock-work mech-

anism impelling the toy, the drum 14, connected with the clock-work, the brake-band 15, enwrapping the drum, the lever 20, connected with the band 15 for tensioning the same, and the latch and rack for locking the lever, substantially as and for the purposes described.

In testimony whereof we have hereunto set our hands this 17th day of February, A. D. 1887.

FRANCIS J. TOTTEN.
ALBERT S. TOTTEN.

Witnesses:
W. B. CORWIN,
THOMAS W. BAKEWELL.