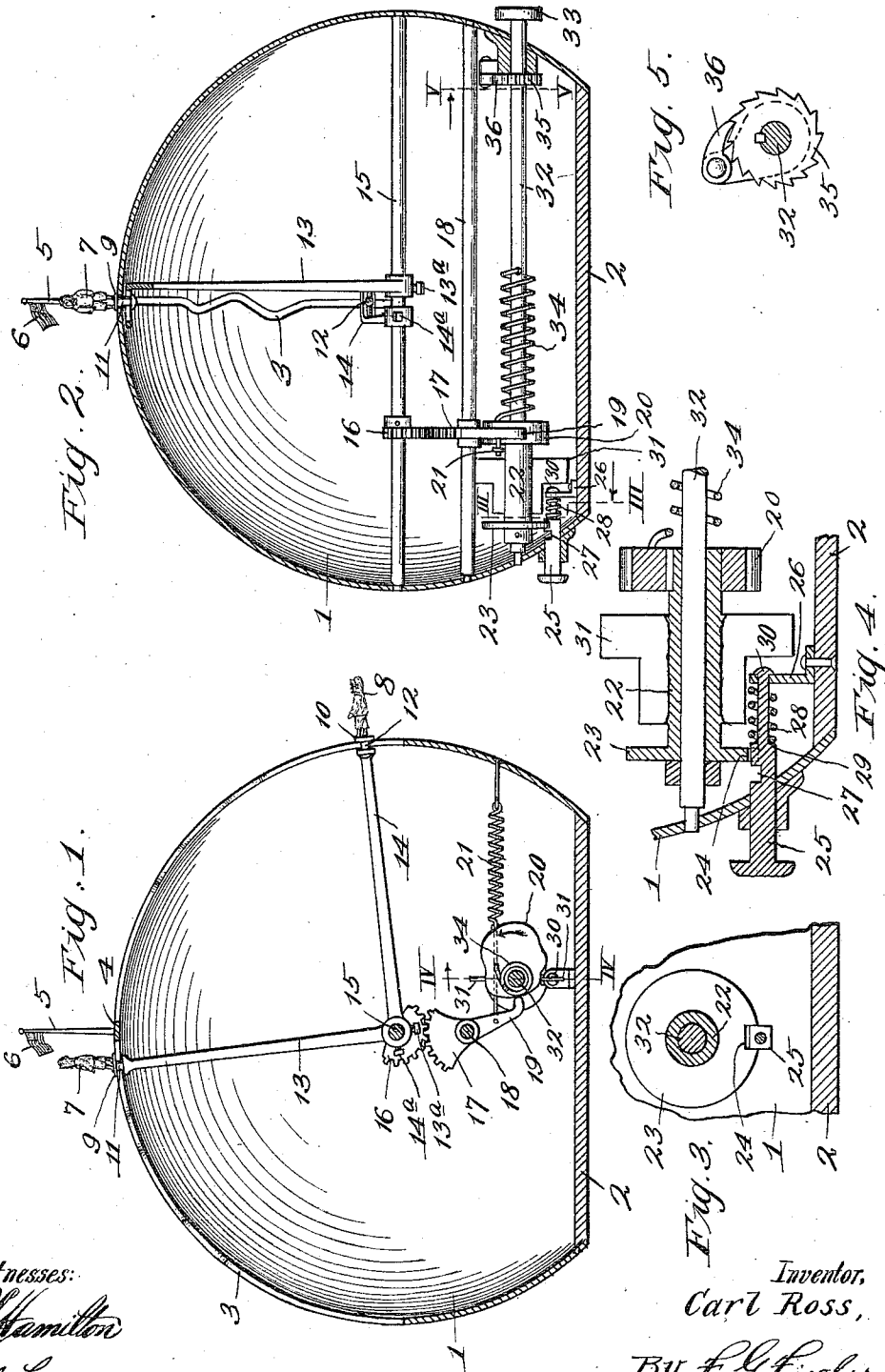


C. ROSS.
MECHANICAL TOY.
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964,560.

Patented July 19, 1910.



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UNITED STATES PATENT OFFICE.

CARL ROSS, OF KANSAS CITY, MISSOURI.

MECHANICAL TOY.

964,560.

Specification of Letters Patent.

Patented July 19, 1910.

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To all whom it may concern:

Be it known that I, CARL ROSS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

My invention relates to mechanical toys and consists broadly of a hollow globe with a flag and a staff at the "north pole" thereof, one or more figures representing explorers seeking said "pole," and mechanisms mounted within said globe, which alternately carry said explorers toward and away from said pole.

Referring to the accompanying drawing: Figure 1 shows a vertical section of the toy. Fig. 2 shows a vertical section of the toy taken at right angles to Fig. 1. Fig. 3 is an enlarged cross section of a stop employed in carrying out the invention, taken on line III—III of Fig. 2. Fig. 4 is an enlarged section on line IV—IV of Fig. 1. Fig. 5 is a cross section on line V—V of Fig. 2.

1 designates the globe which has a flat base 2, and a zig-zag slot 3 extending around the upper half thereof. Slot 3 is interrupted at the "north pole" of the globe by a transverse partition 4, supporting a staff 5, carrying a flag 6.

7 and 8 designate two figures, mounted over slot 3, upon plates 9 and 10, respectively, slidably-engaging the outer surface of the globe. Plates 9 and 10 have depending studs 11 and 12, extending through the slot and slidably-engaging the horizontally slotted terminals of a pair of oscillatory levers 13 and 14, adjustably secured to a rock-shaft 15 by set-screws 13^a and 14^a, respectively. Rock-shaft 15 is mounted in the sides of the globe and provided with a segmental gear 16, actuated by a segmental gear 17, rockingly-mounted upon a shaft 18, and provided with a crank-arm 19 held in engagement with the irregular periphery of a cam 20 by a retractile spring 21, secured at its ends to said crank-arm and the side of the globe. Cam 20 is fixed to one end of a sleeve 22, provided at its opposite end with a disk 23, having a peripheral notch 24, to receive a stop 25, slidably-mounted in the adjacent side of the globe and a bracket 26. Stop 25 is provided at its upper side with a notch 27 so that when pushed inward until said notch registers with the disk, the latter

will be permitted to rotate. Stop 25 is normally held in its operative position shown in Fig. 4, by an expansion spring 28 abutting at its ends against bracket 26 and a shoulder 29 on the stop, the outward movement of which latter is limited by a head 30 on its inner end engaging bracket 26.

31 designates a fan or governor, secured to sleeve 22 to regulate the speed thereof.

32 designates a main shaft journaled in the globe and carrying sleeve 22 which is loosely-mounted thereon. Shaft 32 is provided at its outer end with a knob 33 whereby it may be rotated for the purpose of winding a spring motor 34, secured at its ends to said shaft and the cam 20.

35 designates a ratchet-wheel fixed to shaft 32 and coacting with a pawl 36 to prevent the shaft from turning backward after spring 34 has been wound.

Operation: After spring 34 has been wound, the figures 7 and 8 are set in motion by pushing stop 25 inward until its notch 27 registers with the disk 23. As cam 20 rotates it will, through the intermediacy of the intervening parts impart intermittent motion to the figures and cause them to approach and recede from the staff 5, while the zig-zag slot causes said figures to travel a tortuous path in approaching and receding from said staff. Lever 13 is preferably adjusted in such manner upon shaft 15 as to carry its figure 7 to the staff, while lever 14 is adjusted to carry its respective figure 8 almost to the staff. The above operation, however, may be reversed by loosening the set-screws 13^a and 14^a and adjusting figure 8 closer to the staff than the figure 7.

Having thus described my invention, what I claim is:

1. A hollow globe provided with a slot leading to the upper or north pole thereof, a figure arranged to traverse said slot, and mechanism within said globe and connected to said figure to move the same toward and away from the north pole.

2. A hollow globe provided with a zig-zag slot leading to the upper or north pole thereof, a figure arranged to traverse said slot, an oscillatory-lever mounted within the globe and loosely-connected to the figure to move the same toward and away from the north pole, and means for actuating said lever.

3. A hollow globe provided with a slot

leading to the upper or north pole thereof, a figure arranged to traverse said slot, an oscillatory-lever mounted within the globe and loosely-connected to the figure to move the same toward and away from the north pole, gearing for actuating said lever, a cam for actuating said gearing, and a motor for driving said cam.

4. A hollow globe provided with a slot leading to the upper or north pole thereof, a figure arranged to traverse said slot, an oscillatory-lever mounted within the globe and loosely-connected to the figure to move the same toward and away from the north pole, segmental gearing for actuating said lever, a rotary cam for actuating said gearing, a spring-motor for driving said cam, and a governor for regulating the speed of the cam.

5. A hollow globe provided with a slot leading to the upper or north pole thereof, a figure arranged to traverse said slot, an oscillatory-lever mounted within the globe and loosely-connected to the figure to move the same toward and away from the north pole, gearing for actuating said lever, a cam for actuating said gearing, a motor for driving said cam, and means for stopping said cam.

6. A hollow globe provided with a slot leading to the upper or north pole thereof, a figure arranged to traverse said slot, an oscillatory-lever mounted within the globe and loosely-connected to the figure to move the same toward or away from the north pole, gearing for actuating said lever, a cam for actuating said gearing, a disk connected to said cam and provided with a peripheral notch, and a stop slidingly-arranged in the

side of the globe and adapted to engage the notched portion of said disk.

7. A hollow globe provided with a slot in the upper portion thereof divided by a transverse partition designating the north pole of the globe, a plurality of figures arranged to traverse said slot, a plurality of oscillatory-levers connected to said figures to move the same toward or away from the north pole, a rock-shaft upon which said levers are adjustably-mounted, a gear fixed to said rock-shaft, a gear for driving the first-mentioned gear and provided with a crank-arm, an irregular cam engaging the crank-arm to rock the same, a main shaft upon which said cam is loosely-mounted, a coil-spring secured to said shaft and the cam for driving the latter, a knob on the main shaft, for turning the same to wind the spring, a ratchet-wheel on the main shaft, and a pawl engaging said ratchet-wheel to prevent backward rotation thereof after the spring has been wound.

8. A hollow globe provided with a flat base and a zig-zag slot, which latter leads to the upper or north pole of said globe, an oscillatory-lever mounted within the globe and having an upper transversely-slotted end adjacent the zig-zag slot, a figure arranged to traverse the zig-zag slot and loosely-connected to the slotted portion of said lever, and means for actuating said lever.

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

CARL ROSS.

Witnesses:

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