

July 28, 1959

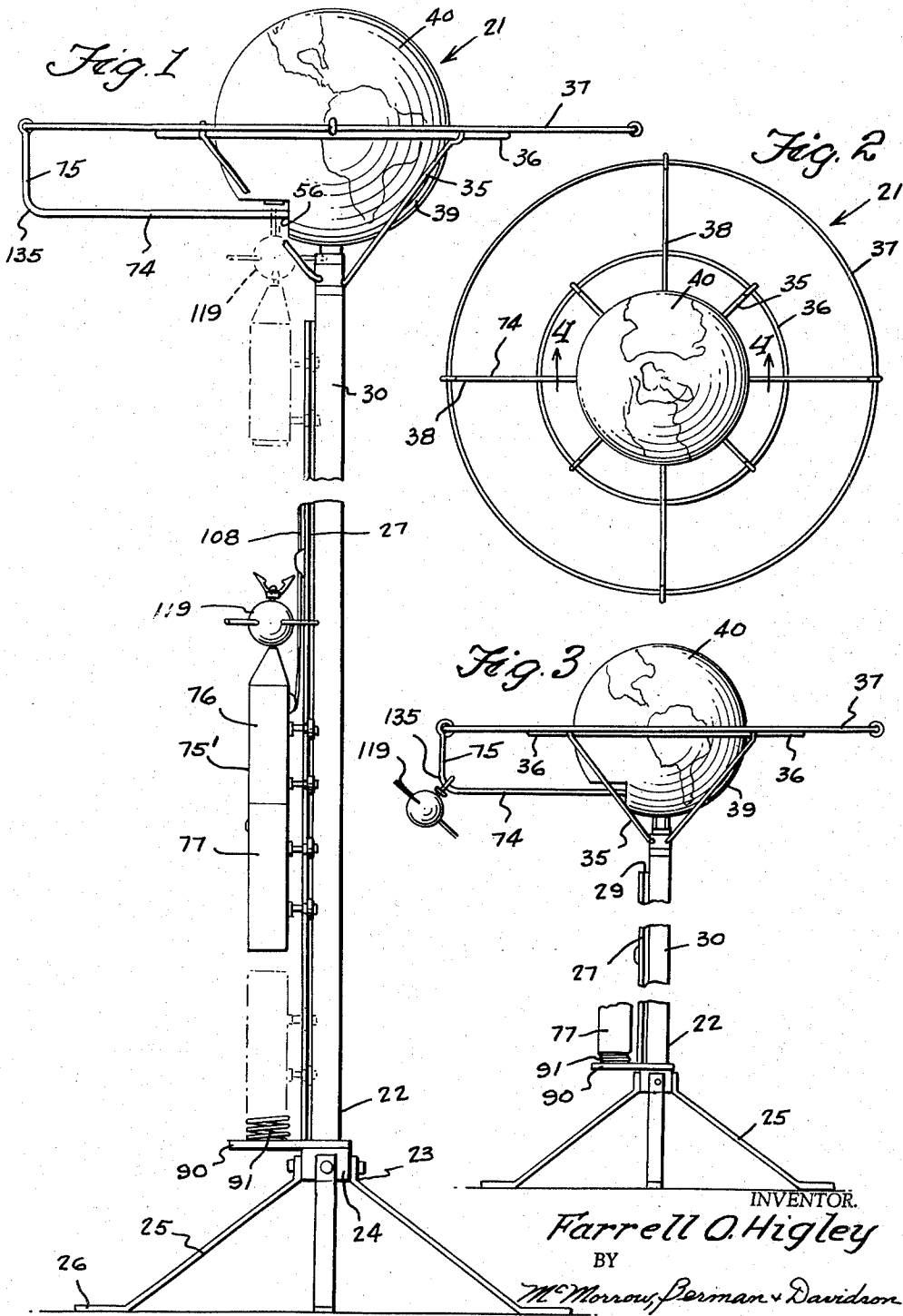
F. O. HIGLEY

2,896,368

TOY ROCKET

Filed May 16, 1958

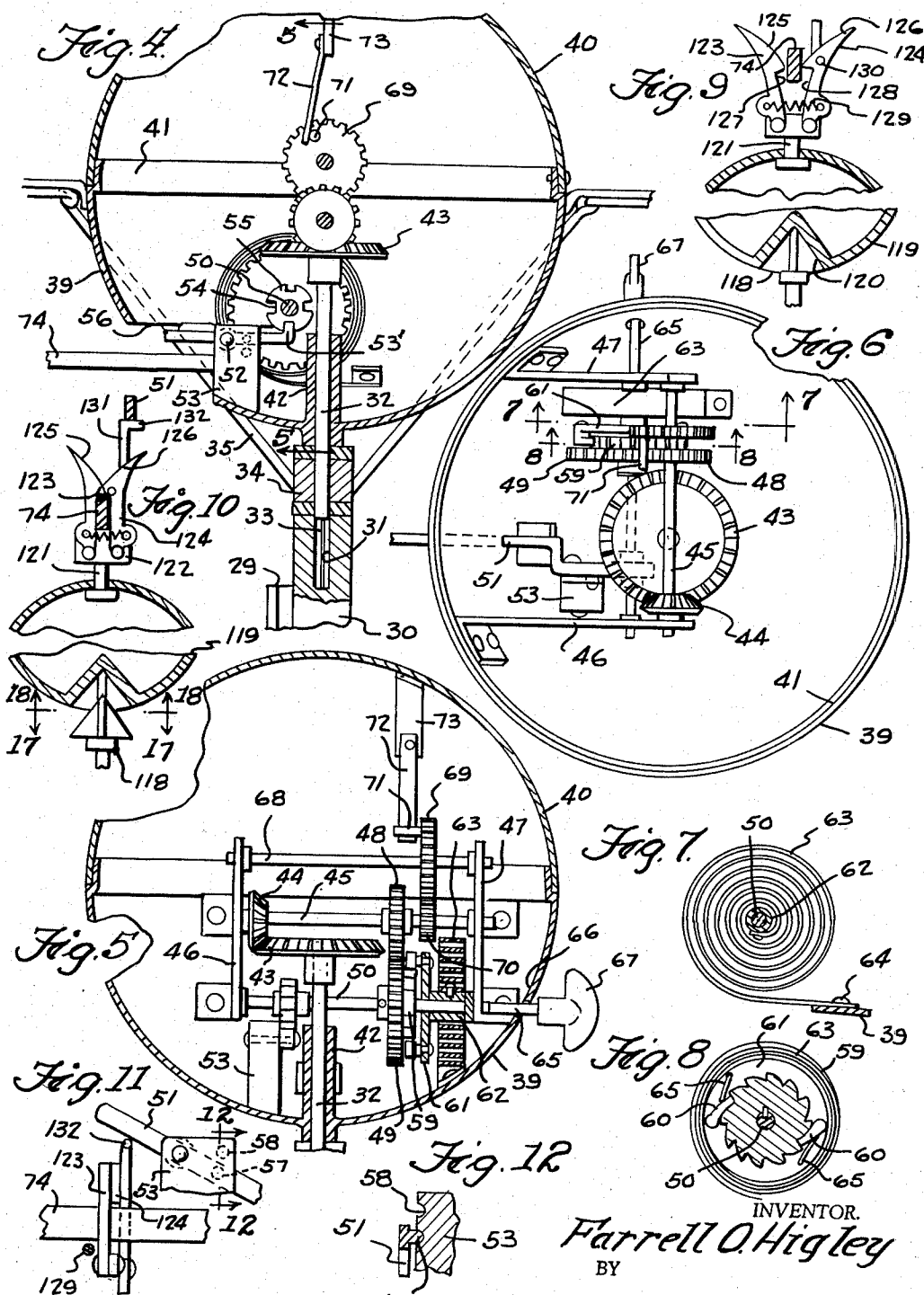
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3 Sheets-Sheet 2



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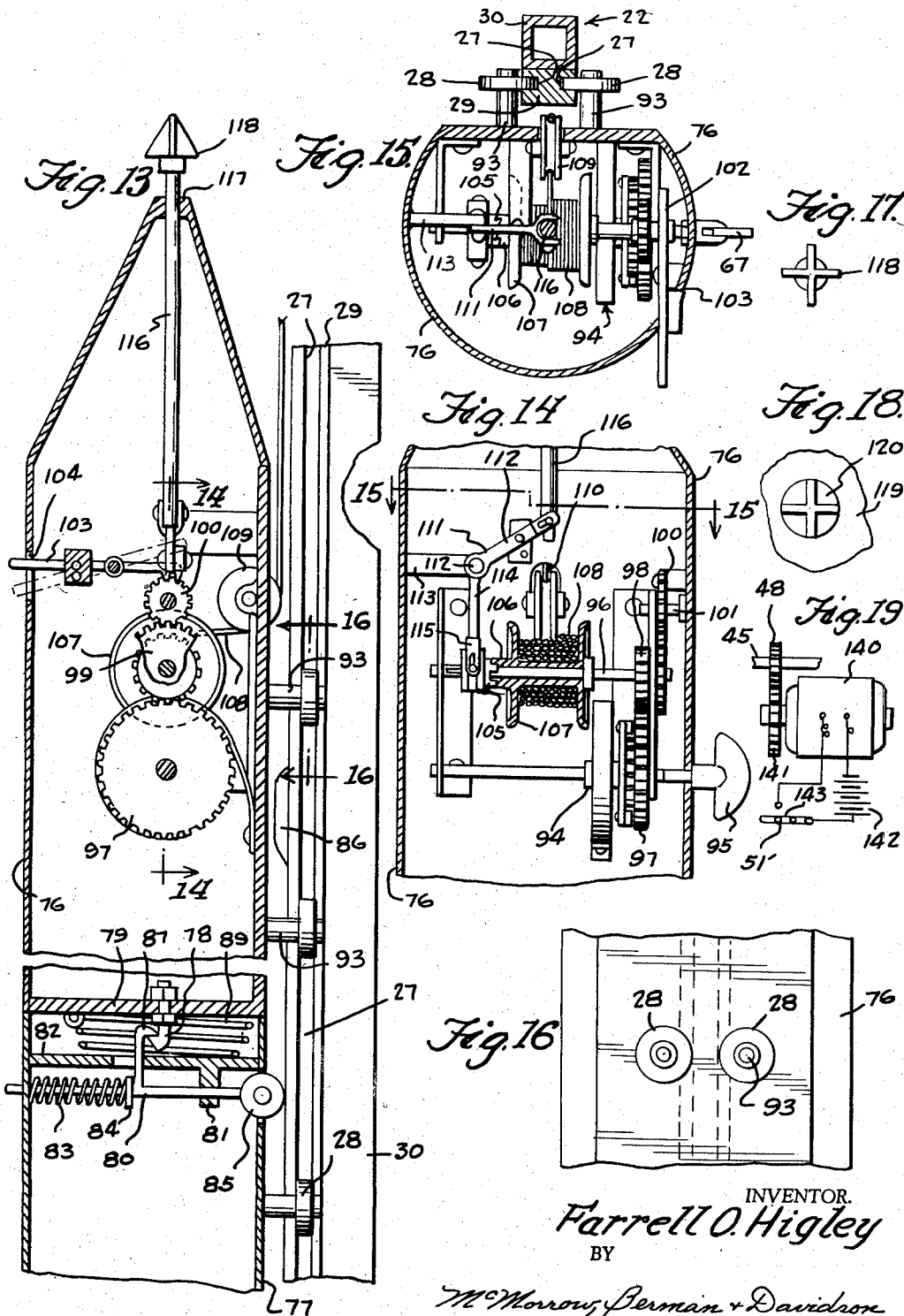
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TOY ROCKET

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9 Claims. (Cl. 46—52)

This invention relates to toys, and more particularly to a toy simulating a multi-stage rocket provided with a simulated toy satellite which is placed in orbit when the rocket is fired.

The main object of the invention is to provide a novel and improved rocket toy which is relatively simple in construction, which is easy to operate, and which simulates to a substantial degree the action of an actual satellite-carrying rocket, whereby the device serves not only the purpose of providing amusement but also serves an educational purpose.

A further object of the invention is to provide an improved toy adapted to simulate the action of a satellite-carrying rocket, the toy being relatively inexpensive to manufacture, being durable in construction, and operating to automatically place a satellite in orbit when the rocket is released.

A still further object of the invention is to provide an improved toy which simulates the firing of a rocket of the type provided with a releasable satellite, the toy demonstrating the action of an actual rocket and illustrating how the satellite is released from the rocket and placed in orbit around the earth, the toy involving relatively simple parts, being reliable in operation, and being substantially completely automatic in its action.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a fragmentary front elevational view of an improved rocket toy constructed in accordance with the present invention.

Figure 2 is a top plan view of the rocket toy of Figure 1.

Figure 3 is a fragmentary side elevational view of the rocket toy of Figure 1, illustrating the position of the simulated satellite associated with the rocket after the satellite has been released and placed in orbit around the globe simulating the earth.

Figure 4 is a fragmentary enlarged vertical cross sectional view taken substantially on the line 4—4 of Figure 2.

Figure 5 is a fragmentary vertical cross sectional view taken substantially on the line 5—5 of Figure 4.

Figure 6 is a top plan view of the globe member of the toy rocket with the top cover thereof removed and showing the mechanism contained within the globe.

Figure 7 is an elevational detail view of the drive spring employed in the motor mechanism for rotating the globe, said view being taken substantially on the line 7—7 of Figure 6.

Figure 8 is an enlarged cross sectional detail view taken substantially on the line 8—8 of Figure 6 and showing the locking ratchet mechanism associated with the motor contained in the globe.

Figure 9 is an enlarged fragmentary vertical cross sectional view taken through the simulated satellite element of the toy and illustrating the manner in which the coupling means on the top of the satellite lockingly

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engage with the radial rod member associated with the globe when the rocket is released.

Figure 10 is an enlarged vertical cross sectional view, similar to Figure 9, but showing how the radial rod member becomes slidably coupled to the top end of the satellite.

Figure 11 is an enlarged fragmentary elevational view showing how the triggering lug member at the top of the satellite actuates the release lever associated with the globe to place the globe in rotation automatically responsive to the firing of the rocket member.

Figure 12 is an enlarged cross sectional detail view taken on the line 12—12 of Figure 11.

Figure 13 is an enlarged fragmentary vertical cross sectional view taken through the simulated rocket member of the toy.

Figure 14 is an enlarged cross sectional view taken substantially on the line 14—14 of Figure 13.

Figure 15 is a horizontal cross sectional view taken on the line 15—15 of Figure 14.

Figure 16 is an enlarged fragmentary elevational view of a portion of the rocket member, said view being taken substantially on the line 16—16 of Figure 13.

Figure 17 is a detail view taken substantially on the line 17—17 of Figure 10, showing the cross sectional shape of the axial clutch-releasing shaft of the simulated rocket.

Figure 18 is a bottom view of the socket provided in the simulated satellite for receiving the tip element shown in Figure 17, said bottom view being taken substantially on the line 18—18 of Figure 10.

Figure 19 is a fragmentary view of a modified form of drive means for the rotatable globe member, said drive means comprising an electric motor substituted for the spring motor illustrated in Figures 4, 5 and 6.

Referring to the drawings, 21 generally designates a rocket toy constructed in accordance with the present invention. The toy comprises a vertical standard 22 which is provided with a supporting base frame 23 consisting of a collar member 24 to which are secured a plurality of downwardly and outwardly inclined supporting feet 25. As shown in Figure 1, the supporting feet 25 are in the form of flat rigid bars having horizontal outer end portions 26, four bars being employed, said bars being spaced at equal angles around the vertical axis of the standard. The standard comprises a bar member of substantially rectangular transverse cross section formed in a pair of opposite faces thereof with grooves 27 defining vertical guideways to receive the guide rollers 28 of a simulated rocket, presently to be described. As shown in Figure 15, the grooves 27, 27 may be formed in an auxiliary track member 29 rigidly secured to a hollow square tubular member 30 which comprises the main body portion of the standard 22.

The top portion of the bar 30 may be solid, as shown in Figure 4, but is formed with an axially extending recess 31 of square cross sectional shape which receives the squared lower end of a vertical shaft member 32 projecting upwardly from the top end of bar 30. Only the bottom end portion 33 of shaft 32 is squared, said bottom end portion 33 lockingly engaging in the squared bore 31. The remainder of shaft 32 is cylindrical. Rotatably engaged on the shaft 32 and being rotatable on the top end of bar 30 is a collar member 34 to which are rigidly secured a plurality of upwardly and outwardly inclined supporting rods 35 on the upper ends of which are fastened a ring member 36. Ring member 36 is thus supported concentrically with the vertical axis of standard 22, in a horizontal position, as is clearly shown in Figures 1 and 3. Designated at 37 is a larger ring member which is secured to and supported by the inner ring member 36, the larger ring member 37 being

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arranged concentrically with inner ring member 36 and substantially in the same horizontal plane therewith. As shown in Figure 2, the outer ring 37 is supported on radially extending rod members 38 rigidly secured in any suitable manner to the inner ring member 36.

Rigidly secured to the inner ends of the radial rods 38 is the lower segment 39 of a globe, said globe being provided with the top cover segment 40 which is received in and secured to a recessed peripheral flange 41 formed on the rim of the lower globe segment 39.

As shown in Figure 4, the lower segment 39 is formed with an upstanding inner bearing sleeve 42 which is rotatable relative to the shaft member 32, and which is of substantial height, whereby the globe is supported in a position such as that illustrated in Figures 1 to 4, wherein the rings 36 and 37 are maintained horizontal.

Rigidly secured to the top end of the shaft 32 is a bevel gear 43 of substantial diameter, and meshing therewith is a bevel gear 44 of much smaller diameter mounted on a horizontal shaft 45 journaled in parallel vertical bracket plates 46 and 47 secured in the lower globe segment 39. Also secured on the shaft 45 is a gear 48 which meshes with a larger gear 49 secured on the shaft 50 journaled between the plates 46 and 47 parallel to the shaft 45.

Shaft 50 is normally restrained against rotation by a detent lever 51 which is pivoted at 52 in an upstanding bracket 53 secured in the lower globe segment 39, the lever 51 having an upwardly projecting detent lug 53' formed on its inner end which lockingly engages in a notch 54 of a locking disc 55 secured on shaft 50. The lever 51 extends adjacent an opening 56 formed in the lower portion of the bottom globe segment 39, as shown in Figure 4.

Lever 51 may be rotated clockwise from the horizontal position thereof shown in Figure 4, to cause the lug 53' to disengage from the notched disc 55, as illustrated, for example, in Figure 11. The lever 51 is formed with an inwardly projecting holding lug 57 which is selectively engageable in a pair of locking recesses 58 provided in the inner wall surface of the bracket member 53, as shown in Figure 12, the lever 51 being sufficiently resilient to allow the locking lug 57 to be disengaged from one recess 58 and to enter the other recess 58 responsive to rotation of the lever 51 by the application thereto of a moderate force. Thus, when the lever 51 is rotated from the position of Figure 4 to the position of Figure 11, said lever will be yieldably secured in its rotated position, namely, in a position allowing disc 55 and shaft 50 to rotate freely. Otherwise, the lever 51 may be rotated to the position shown in Figure 4, wherein shaft 50 is restrained against rotation.

Rigidly secured to gear 49 concentrically therewith is a ratchet disc 59 which is engaged by pivoted pawls 60, 60 mounted on a drive disc 61 rigidly secured to a drive sleeve 62 rotatably engaged on the shaft 50. A spiral driving spring 63 has its inner end secured to the sleeve 62 and has its outer end secured at 64 to the interior wall surface of the lower globe segment 39, as shown in Figure 7.

Suitable leaf springs 65, 65 are provided on the drive disc 61, as shown in Figure 8, engaging the drive pawls 60, 60 and urging said pawls into engagement with the toothed periphery of the ratchet wheel 59.

As shown in Figure 5, one end of the shaft 50 is rotatably supported in the sleeve member 62. The sleeve member is rigidly formed with a shaft extension 65 which extends rotatably through the supporting plate 47 and through an aperture 66 in the lower globe segment 39. A handle knob 67 is secured to the outer end portion of the shaft 65, whereby the driving spring 63 may be placed under considerable tension by rotating the handle knob 47, since unwinding of the spring is normally prevented by the engagement of the pawl members 60, 60 with the toothed periphery of the ratchet disc 59.

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However, as will be readily apparent when the shaft 50 is released by the disengagement therefrom of the lugs 53', as above described, the spring 63 may unwind, causing shaft 50 to rotate. The gear 49 thus transmits torque through gear 48 to the shaft 45. Bevel gear 44 thus applies torque to the stationary, horizontally arranged bevel gear 43, producing a reaction which rotates the globe around the vertical axis of standards 22.

Journalled between the supporting plates 46 and 47 above shaft 45 is an additional shaft 68 carrying a gear 69 which meshes with a smaller gear 70 mounted on shaft 45. Rigidly secured to gear 69 is an axially extending pin 71 which is intermittently engageable with a vibratory spring member 72 secured at its top end to a depending bracket 73 fastened to the inside surface of the upper globe segment 40. Thus, the spring 72 is vibrated intermittently by the rotation of shaft 68, producing a periodic group of audible vibrations resembling the whirring vibrations produced by an actual radio signal derived from a satellite. The audible signals thus developed begin simultaneously with the release of the shaft 50, so that the signals continue for a substantial period of time, namely, until the spring 63 runs down, and continue as long as the globe rotates.

Designated at 74 is a radially extending rod member which is secured at its inner end to the lower globe segment 39 and which extends outwardly beneath and substantially parallel to one of the radial rod members 38, as shown in Figure 2. The lower rod 74 is formed at its outer end with a vertical portion 75 rigidly secured to the outer ring 37. As shown in Figure 4, the radial rod member 74 extends below and substantially parallel to the release rod 51 when said rod is in its horizontal position.

Designated generally at 75' is a simulated rocket member which comprises an upper hollow segment 76 and a lower hollow segment 77, the rocket segments being detachably secured together, as by the provision of a depending latch hook 78 secured to the bottom 79 of the upper rocket segment 76 and a slidable detent hook 80 mounted in a supporting lug 81 depending from the top wall 82 of the bottom rocket segment 77, as shown in Figure 13. As shown, the hook-like member 80 is horizontally slidable and is biased toward locking position with respect to the detent lug 78 by a coiled spring 83 surrounding the shank portion of the member 80 and bearing between a washer 84 provided thereon on the inside surface of the wall of rocket segment 77. The shank portion of the member 80 extends slidably through an aperture provided therefor in the sprocket wall. At its opposite end the horizontal shaft portion of the member 80 is provided with a follower roller 85 which bears against the track member 29. The track member 29 is provided at its intermediate portion with a cam member 86 which is engageable by the follower roller 85 to cause the member 80 to be forced inwardly against the pressure of spring 83 and to be thus moved inwardly a sufficient distance to allow the hook element 87 of member 80 to disengage from the latch element 78. A coiled spring 89 is secured to the bottom wall 79 of the upper rocket segment, bearing downwardly on the top wall 82 of the lower rocket segment, whereby to force the segments apart when the element 87 disengages from detent member 78, thus projecting the lower segment 77 downwardly relative to the upper segment 76 at this point.

Secured to the lower portion of the standard 22 and supported on the collar 24 is a horizontally extending platform member 90 on which is secured a cushioning spring 91 adapted to cushion the impact of the lower rocket segment 77 when it is detached from the upper rocket segment 76 and drops downwardly.

The respective rocket segments 76 and 77 are provided with respective pairs of vertically spaced horizontally projecting shaft elements 93 extending on opposite sides of the grooved track member 29 and having guide rollers

28, 28 journaled thereon, as shown in Figure 15, said guide rollers engaging in grooves 27, 27, to guide the rocket segments for vertical movement.

Mounted in the upper rocket segment 76 is a conventional spring motor 94 having an external winding knob 95, the spring motor 94 being substantially similar to the spring motor previously described and contained within the globe of the device. The motor 94 is drivingly connected to the horizontal shaft 96, the driving gear 97 of the motor meshing with a driven gear 98 secured on shaft 96. Another gear 99 on shaft 96 meshes with a holding gear 100, said holding gear being journaled on a shaft 101 mounted horizontally in the rocket segment 76 and being engaged by the depending lug 102 formed on the end of a locking lever 103 pivotally mounted in the rocket segment 76 and projecting outwardly therefrom through a vertical slot 104 formed in the wall of the rocket segment, as shown in Figure 13. The lever 103 is releasably held in either a horizontal locking position, as shown in full line view in Figure 13, or in a rotated released position, shown in dotted line view in Figure 13 by detent means similar to that previously described in connection with the release lever 51. Thus, the lever 103 is normally in a locking position and is releasably held therein by its detent means. The lever 103 may be manually rotated in a counterclockwise direction, as viewed in Figure 13, toward release position, and will be releasably held in said released position by its detent means. When thus rotated, the spring motor 94 is released and allowed to operate.

Keyed to the shaft 96 but slidable longitudinally thereon is a clutch collar 105 which is normally in meshing engagement with an opposing clutch segment 106 formed on a cable reel 107 rotatably mounted on the shaft 96. Thus, cable reel 107 is coupled to shaft 96 when the clutch collar 105 is in meshing engagement with the clutch segment 106 provided on the reel. A cable 108 is wound on the reel and extends around a guide pulley 109 journaled in the upper segment 76 adjacent an aperture 110 provided in the wall of said upper segment through which the cable extends. The end of the cable 108 is secured in any suitable manner to the top end portion of the guide track 29, whereby the winding up of the cable on the reel 107 elevates rocket segment 76.

Designated at 111 is a bell crank lever pivoted at 112 to a horizontal lug 113 secured inside the upper rocket segment 76 above the clutch segment 105. A depending arm 114 on the bell crank lever 111 carries a clutch-operating yoke member 115 which engages the slidable clutch segment 105. Another arm 112 of the bell crank is slidably and pivotally connected to a vertical rod 116 which extends axially in the rocket segment 76 and extends slidably through an aperture provided in the tip 117 of the rocket segment.

As will be apparent from Figure 14, when the rod 116 moves downwardly, the bell crank lever 111 is rotated in a clockwise direction, shifting the clutch segment 105 to the left, as viewed in Figure 14, and disengaging same from the reel clutch segment 106. This frees the reel relative to the shaft 96. As will be presently explained, this action occurs when the upper rocket segment 76 reaches the top limit of its vertical upward movement, at which point reel 107 is freed, allowing the rocket segment to drop downwardly.

Secured to the top end of the vertical rod member 116 is an upwardly tapering head 118 which is of horizontal cross sectional shape. Designated at 119 is a simulated, generally spherical satellite which is formed in its bottom surface with an upwardly tapered recess 120 substantially identical in shape to the head member 118 and being thus lockingly interengageable therewith to normally support the satellite 119 on said head 118.

The simulated satellite 119 is of hollow construction and has rigidly secured to its top wall the upwardly extending vertical shank element 121 carrying a bracket 75

member 122. Pivoted to the bracket member 122 are a pair of opposing catch arms 123 and 124, said catch arms having the upwardly divergent arcuately curved inner edge portions 125, 126 and being formed with opposing detent notches 127 and 128 below the upwardly divergent edge portions 125 and 126. The detent members 123 and 124 are connected at their intermediate portions by a biasing spring 129 which urges the members towards each other, the member 124 being provided with a stop pin 130 engageable by the member 123 to mutually limit the inward rotations of the members 123 and 124 to normally substantially vertical positions. The latch members 123 and 124 are normally disposed below and in vertical alignment with the radial rod member 74, whereby the upward movement of the satellite causes the rod member 74 to engage between the opposing latch members 123 and 124, forcing them apart and allowing the rod member to engage in the opposing notches 127 and 128, whereby to slidably connect the satellite to the radial rod member 74.

Secured to the latch member 124 is the upwardly projecting finger 131 formed at its top end with a horizontal lug member 132 which is engageable with the bottom edge of the release rod 52 at the same time that the latch members 123 and 124 become slidably connected to the radial rod 74, whereby rod member 51 is elevated at this point to the position thereof shown in Figure 11, releasing the globe spring motor.

In operation, with the rocket arranged in the position thereof illustrated in full line view in Figure 1, the release lever 103 of the rocket is rotated from its full line position of Figure 13 to its dotted line position, releasing the rocket spring motor 94, whereupon the reel 107 begins to wind up the cable 108 thereon, elevating the rocket. When the follower roller 85 engages the cam lug 86, the bottom segment 77 becomes detached and drops downwardly, whereas the upper segment 76 continues in its upward vertical movement. When the detent arms 123 and 124 engage with the radial rod 51, as above described, the lug 132 elevates the release lever 51 and rotates said lever clockwise, as viewed in Figure 4, releasing the notched disc 55 and the shaft 50. The spring motor in the globe then begins to operate and rotates the globe around the vertical axis of the standard 22. The rotation of the globe produces centrifugal force acting on the simulated satellite 119, moving said satellite outwardly along the radial rod member 74 until the satellite finally assumes a position such as that illustrated in Figure 3, wherein the satellite is supported at the bend 135 between the horizontal portion of the radial rod 74 and the vertical portion 75 thereof. Thus the satellite rotates with the globe as the spring 63 of the motor in the globe unwinds, the rotation of the globe and the satellite being accompanied by the intermittent sound pulses produced by the vibration of the vibratory spring sounding member 72, which may comprise a relatively thin leaf spring.

Although in the form of the invention above described the globe has been illustrated as being driven by a spring motor and the satellite has been illustrated as being elevated by a similar motor, obviously any suitable type of propulsion means may be employed, for example, electric motors, such as motors 140, as illustrated in Figure 19. Thus, for example, the motor in the globe may comprise an electric motor 140 having a driving gear 141 meshing with the gear 48 on the shaft 45, the motor being energized by a suitable battery 142 carried in the globe and being connected thereto through a suitable switch 143 having a pivoted switch arm 51' actuated by the lug 132 on arm 131 of the satellite. The upper rocket segment 76 may be provided with a similar electric motor in place of the spring motor previously described, the motor being energized by a suitable battery connected thereto through a manually operated control

switch which may be actuated to close same to place the apparatus in operation.

As will be readily apparent, when the upper rocket segment reaches its uppermost position, the satellite disengages from the head member 113, and the upward force of impact causes the body of the satellite to continue upward movement relative to the shaft element 116, whereby to rotate the bell crank lever 111 and disengage clutch segment 105 from clutch segment 106. This frees the cable reel 107 from the shaft 96, and allows the cable 108 to unwind from said reel, whereby the upper rocket segment 76 is allowed to drop downwardly and descend until it engages the previously released lower rocket segment 77.

While certain specific embodiments of an improved rocket and satellite toy have been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, motor means formed and arranged to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, motor means in said rocket member formed and arranged to elevate same to a position adjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

2. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, a motor mounted in said globe, means drivingly coupling said motor to the top portion of said standard, whereby to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, a cable reel rotatably mounted in said rocket member, a cable wound on said reel and connected to the upper portion of said standard, a motor mounted in said rocket member and drivingly coupled to said reel, whereby to elevate said rocket member to a position subjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

3. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, motor means formed and arranged to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, motor means in said rocket member formed and arranged to elevate same to a position subjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said

coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member, and means initiating operation of said first-named motor means simultaneously with contact of said coupling means with said rod member.

4. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, motor means formed and arranged to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, motor means in said rocket member formed and arranged to elevate same to a position subjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member, latch means normally restraining said first-named motor means against operation, and means releasing said latch means simultaneously with the contact of said coupling means with said rod member.

5. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, motor means formed and arranged to rotate said globe, a simulated rocket member including a lower detachable section slidably connected to said standard parallel and adjacent thereto, motor means in said rocket member formed and arranged to elevate same to a position subjacent said globe, cooperating release means on the rocket member and standard formed and arranged to release said lower section when the rocket member moves upwardly to an intermediate position on said standard, a simulated satellite detachably mounted on the top end of said simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

6. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, a motor mounted in said globe, means drivingly coupling said motor to the top portion of said standard, whereby to rotate said globe, a simulated rocket member including a lower detachable section slidably connected to said standard parallel and adjacent thereto, a cable reel rotatably mounted in said rocket member, a cable wound on said reel and connected to the upper portion of said standard, a motor mounted in said rocket member and drivingly coupled to said reel, whereby to elevate said rocket member to a position subjacent said globe, cooperating release means on the rocket member and standard formed and arranged to release said lower section when the rocket member moves upwardly to an intermediate position on said standard, a simulated satellite detachably mounted on the top end of the simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member, and means initiating opera-

tion of said first-named motor means simultaneously with contact of said coupling means with said rod member.

7. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, a motor mounted in said globe, means drivingly coupling said motor to the top portion of said standard, whereby to rotate said globe, a simulated rocket member including a lower detachable section slidably connected to said standard parallel and adjacent thereto, a cable reel rotatably mounted in said rocket member, a cable wound on said reel and connected to the upper portion of said standard, a motor mounted in said rocket member and drivingly coupled to said reel, whereby to elevate said rocket member to a position subjacent said globe, cooperating release means on the rocket member and standard formed and arranged to release said lower section when the rocket member moves upwardly to an intermediate position on said standard, a simulated satellite detachably mounted on the top end of said simulated rocket member, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member, latch means normally restraining said first-named motor means against operation, means releasing said latch means simultaneously with the contact of said coupling means with said rod member, a vibratory sounding member mounted in said globe, and means intermittently vibrating said sounding member responsive to operation of said first-named motor means.

8. A rocket and satellite toy comprising a vertical standard, a globe rotatably mounted on the standard, motor means formed and arranged to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, motor means formed and arranged to elevate said rocket member to a position subjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket member, a radial rod member secured to and extending subjacent said globe and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with and being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

9. A toy of the character described comprising a standard, a globe rotatably mounted on the standard, means to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, means to elevate said rocket member to a position subjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket member, a rod member secured to and extending subjacent said globe and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with and being slidable on said rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

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