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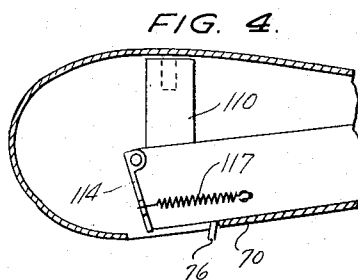
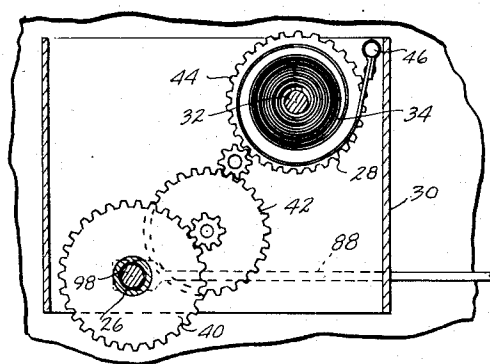
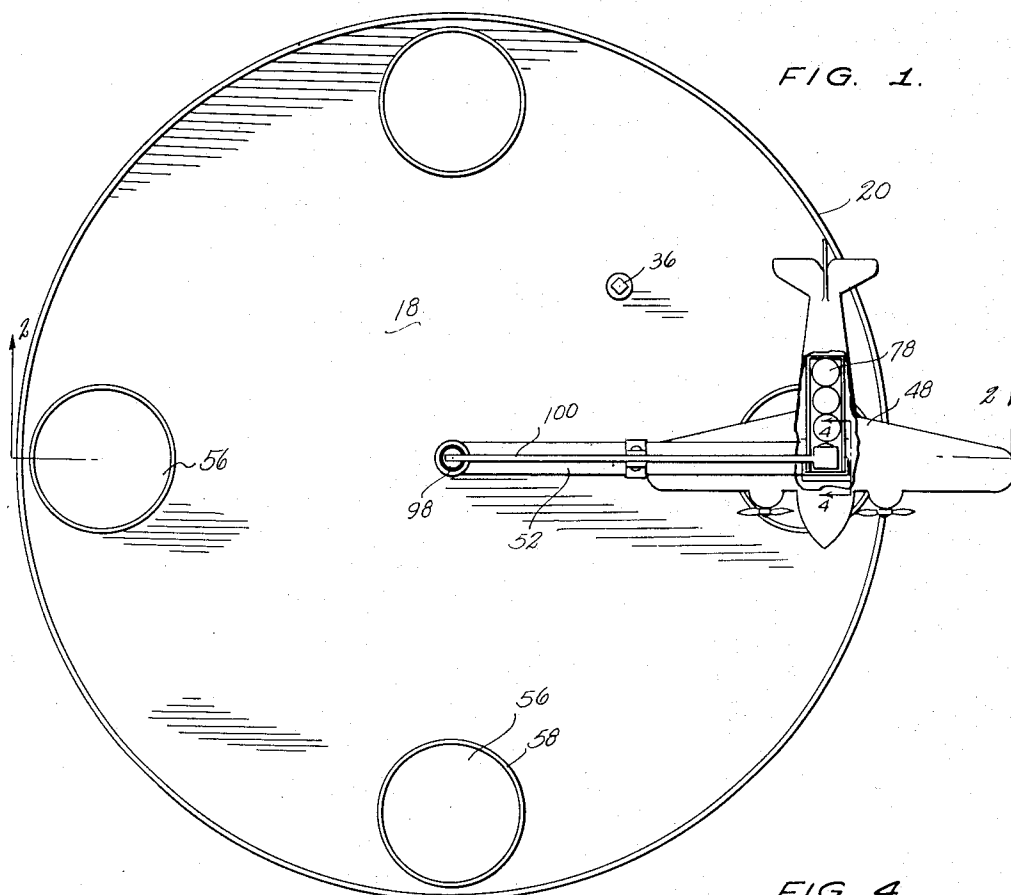
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TOY BOMBER AND BOMB CARRIER AND RELEASE MECHANISM

Filed March 23, 1951

2 Sheets-Sheet 1



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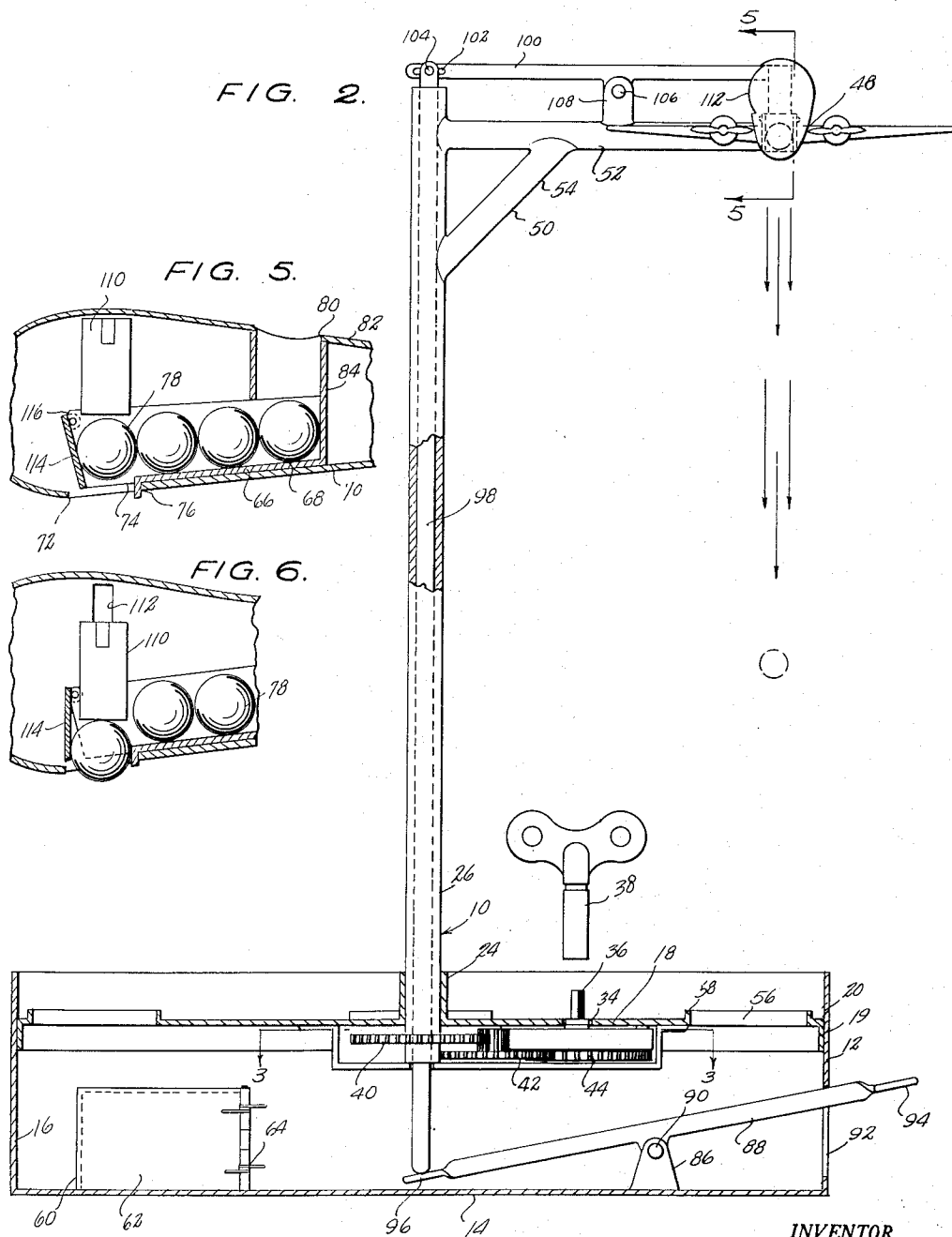
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TOY BOMBER AND BOMB CARRIER AND RELEASE MECHANISM

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TOY BOMBER AND BOMB CARRIER AND
RELEASE MECHANISM

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1 Claim. (Cl. 273—95)

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This invention appertains to improvements in toy games and particularly relates to improvements in toy bombing games, wherein toy planes are provided with bomb simulative projectiles, which are released and dropped from the plane to fall into a target underlying the plane.

The primary object of this invention is to provide means for rotating a toy plane at a slow rate of speed over a horizontally disposed apertured target and to provide means for individually releasing projectiles, which are housed in a runway in the plane, the release means for the projectiles being disposed within the supporting means for the plane and being operable, without interfering with the rotation of the plane.

Another object of this invention is to provide a rotatable pylon or post, to which a toy plane is affixed by a lateral support, the post being rotated by a spring motor, and the plane carrying a supply of bomb simulative balls or projectiles, the projectiles being selectively released to gravitate onto a target underlying the plane by a release mechanism, which is slidably disposed within the post and connected by a suitable pivotal linkage to the plane.

A further object of this invention is to provide a compact and inexpensive toy, which requires a certain amount of skill and which will afford considerable periods of enjoyment.

These and ancillary objects and structural features of merit are attained by this invention, the preferred embodiment of which is set forth in the following description and illustrated in the accompanying drawings, wherein:

Figure 1 is a top plan view of the toy game, constructed in accordance with the principles of this invention;

Figure 2 is a longitudinal sectional view, with the supporting means for the plane and the plane being shown in elevation, taken on line 2—2 of Figure 1;

Figure 3 is a fragmentary longitudinal sectional view taken on line 3—3 of Figure 2 and illustrating the drive means for the supporting post for the plane;

Figure 4 is a fragmentary longitudinal sectional view of the fuselage of the plane, illustrating the retaining door and ramp for the balls or projectiles;

Figure 5 is a fragmentary longitudinal sectional view taken on line 5—5 of Figure 2, and,

Figure 6 is a fragmentary sectional view, similar to Figure 5, but illustrating the release mechanism in operation.

Referring now more particularly to the ac-

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companying drawings, the bombing game 10 includes a housing 12, the housing consisting of a flat bottom wall 14 and an upstanding cylindrical side wall 16. A top wall 18 is formed with a depending peripheral flange 19, which is fixedly secured to the inner surface of the side wall 12, below the upper edge thereof, so that the upper portion 20 of the side wall projects upwardly of the periphery of the top wall 18 and forms an upstanding retaining flange for the top wall 18 to prevent the gravitating balls or projectiles from falling off the edge of the top wall.

An upstanding sleeve 24 is formed at the center of the top wall 18 and receives the lower end of a tubular post or pylon 26. The post 26 is rotated in the bearing sleeve 24 by means of a gear reduced spring motor 28. The spring motor 28 is mounted in a housing 30, which is affixed to the underside of the top wall 18 and includes a shaft 32, which projects upwardly through an opening 34 in the top wall and terminates in a square end 36, on which the socket end of a key 38 is positionable. A gear 40 is fixedly circumposed on the lower end of the post 26, within the housing 30, and is connected by a speed reduction gearing 42 to a gear 44, fixedly circumposed on the shaft 32. One end of a coil spring 34 is fixed to the shaft 32 and the other end is anchored to a pin 46, whereby rotation of the shaft 36 will wind the spring 34 and impart spring urged rotation to the gear 44. Rotation of the gear 44 through the speed reduction gearing 42 will be transmitted by the gear 40 to the post 26, so that the post will rotate within the sleeve 24.

A toy plane 48, which may be formed from any desirable material and designed in any conventional fashion, is carried by the upper end of the post 26 by means of a laterally extending supporting structure 50. The supporting structure 50 includes a lateral arm 52, which is rigidified by a diagonal brace arm 54, and to the outer end of which the fuselage of the plane 48 is suitably anchored. The plane 48 will be disposed in a horizontal plane for rotation about a vertical axis and will overlie the top wall 18 of the housing. Openings 56 are formed in the top wall 18 of the housing and are circumferentially spaced in the top wall, the openings being formed so that they will be in vertical alignment with the fuselage of the plane, as the plane rotates about its vertical axis. The openings 56 are provided with upstanding retaining flanges 58, so that in the event one of the bombs or projectiles, released from the plane, is misdirected and does not go through the opening 56 into the housing, it will

be prevented from rolling on the top wall and falling into another of the openings. In this fashion, the projectile can only gravitate into the selected opening or else it will remain on the top wall but, in such position, will not interfere with the operation of the plane or the subsequent playing of the game.

Obviously, the upper surface of the top wall 18 can be suitably designed so as to represent an ocean, with the openings representing battleships or may be designed in any other fashion, the openings being given different values or the scoring of the game being determined in any desired fashion.

A suitable opening 60 is formed in the side wall 12 of the housing, below the top wall 18, and is enclosed by a hinge closure 62, which is held in a closed position by springs 64. The projectiles, which accumulate in the housing, may be removed from the housing, by urging the closure or door 62 inwardly, against the opposition of the springs 64, and tilting the housing, so that the balls or projectiles will roll on the bottom wall through the opening 60.

An inclined channel-shaped or U-shaped ramp 66 is mounted in the fuselage, with the inclined bottom wall 68 of the ramp seated on the inclined lower wall 70 of the fuselage of the plane. An opening 72 is formed in the underside 70 of the fuselage and a vertically aligned opening 74 is formed in the bottom wall 68 of the trough-like ramp. A depending lip 76 is formed on the end of the bottom wall 68 of the ramp and engages the rearward edge of the opening 72, as seen in Figure 5, so as to prevent one of the released balls or projectiles 78 from being thrown backward, as it is being released. An opening 80 is formed in the upper side 82 of the fuselage and a tube 84 communicates the opening 80 with the ramp, so that the ramp can be loaded, the balls or projectiles being dropped into the ramp through the opening 80.

A release mechanism is provided and includes an upstanding ear 86, which is formed on the bottom wall 14 of the housing. A lever 88 is pivoted by a pin 90 to the ear and extends through a vertical slot 92 formed in the side wall 12 of the housing. The outer end of the lever terminates in a horizontally disposed finger grip 94 and the inner end terminates in a lift member 96. A rod 98 is slidably mounted within the tube 26, the rod being disposed for rectilinear movement through the tube and being connected at its upper end to a horizontally disposed link 100. The end of the link, adjoining the upper end of the rod, is formed with an axial slot 102, which receives a pivot pin 104, the pin 104 extending through the upper terminal of the rod 98. The slot 102 is provided, so that the link 100 can pivot about an axis 106, as the rod 98 is lifted, upon downward movement of the end 94 of the lever 88 about the axis 90. The axis 106 for the link 100 is defined by a pivot pin, which is carried by an ear 108, which projects upwardly from the arm 52, the pin being affixed to a depending ear formed on the underside of the link 100. A release finger 110 is secured to the opposing end of the link 100 and depends therefrom, the finger 110 being disposed within the fuselage of the airplane, with the end of the link being slidably disposed in a suitable vertical slot 112 formed in the side wall of the fuselage, so that the finger 110 overlies the aligned discharge openings 72 and 74, formed in the underside of the fuselage and in the bottom wall of the ramp.

To prevent the balls or projectiles from gravitating from the fuselage of the plane, without actuation of the release mechanism, a spring urged door 114 is provided and is formed with lateral ears 116, which are pivoted to the sides of the ramp, as seen in Figure 5, so that the door or retaining member 114 is normally disposed in an inclined plane and is forced into a vertical plane, upon actuation of the release mechanism, under the downward movement of the release finger 110, as seen in Figure 6, the coil 117 retaining the door in place.

In use, the spring motor is wound by the key 38 and the post 26 is rotated at a predetermined speed, so that the plane 48 is rotated about the vertical axis, the plane overlying the target openings 56 in the top wall 18 of the housing. The lever 88 is then depressed, so that the lever pivots about the axis 90 and lifts the rod 98. Upward axial movement of the rod 98 will effect a corresponding curvilinear movement of the link 100, so as to accomplish a downward movement of the release finger 110. As the release finger moves downwardly, it engages the lead ball or projectile and forces the projectile, against the restraint of the member 114, which is spring urged, through the discharge openings. The released ball or projectile will then gravitate down toward the top wall 18 of the housing and, dependent upon the skill and luck of the player, will pass through one of the openings 56 into the interior of the housing.

After the entire load of balls or projectiles have been released from the plane, the players' score is totaled, dependent upon the various values given to the openings 56 and, the balls are then retrieved from the housing, by opening the door 62.

The plane is again loaded by dropping the projectiles one by one through the opening 80 into the ramp.

Having thus described this invention, what is claimed is:

A toy bombing game comprising a housing having a top wall, said top wall being formed with target openings, an upstanding tubular post rotatably disposed through the top wall, a prime mover in said housing rotating said post, a lateral support on the upper end of the post, a toy plane carried by the support, means in said plane for retaining projectiles in releasable aligned fashion, said plane having a discharge opening therein communicating with said means at one end thereof and a loading opening communicating with said means at the other end, a spring urged retaining member carried by the plane and disposed in transverse adjacency to the discharge opening, a release member slidably disposed in the plane and engageable with a projectile adjacent said one end of said means to force the projectile against the retaining member to release it and expel the projectile through the discharge opening for gravitation toward the top wall of the housing, means for actuating the release member, said last means including a lift rod slidably disposed in the post, an actuating member for said rod mounted in the housing, a link pivotally supported by the plane support adjacent the center thereof and pivoted to the upper end of the rod, said link supporting the release member, said actuating member including a lever, an ear projecting upwardly in the housing, and means pivoting the lever to the ear for vertical swinging movement, one end of the lever being disposed under the lower end of the rod for abut-

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ting engagement therewith and the opposing end of the lever projecting outwardly from the housing for manual depression.

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