Feb. 26, 1924. 1,484,752

A. G. APPERSON ET AL

AMUSEMENT DEVICE

Filed May 9 1922 4 Sheets-Sheet 1

FIG. 1

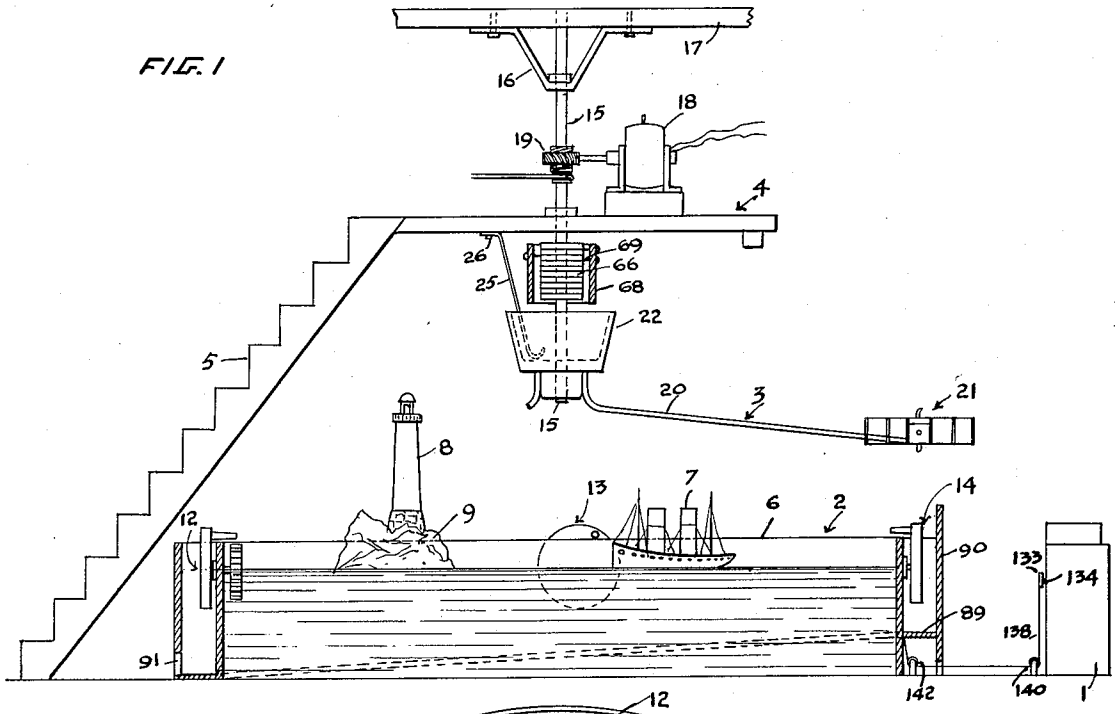
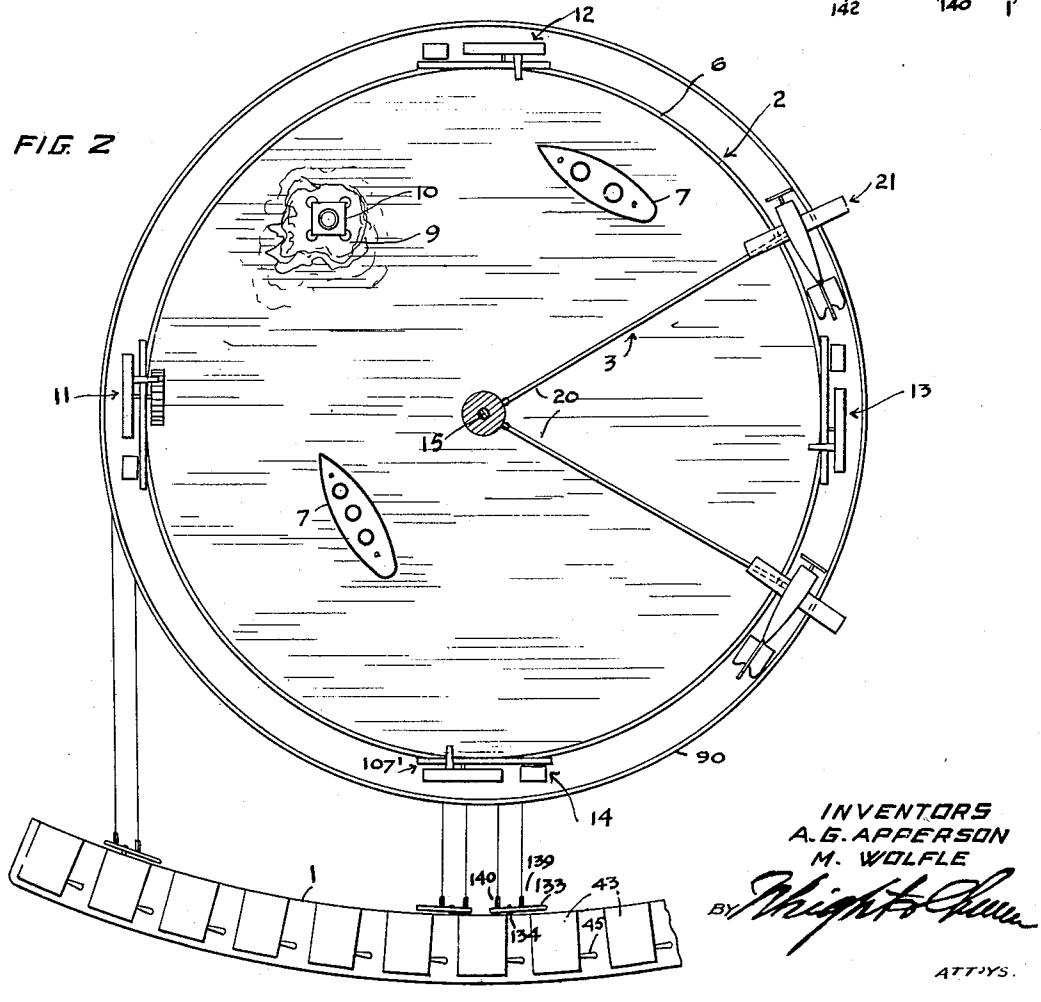


FIG. 2



INVENTORS
A. G. APPERSON
M. WOLFLE
BY Wright Brown
ATTYS.

Feb. 26, 1924. 1,484,752

A. G. APPERSON ET AL

AMUSEMENT DEVICE

Filed May 9 1922 4 Sheets-Sheet 2

FIG. 4

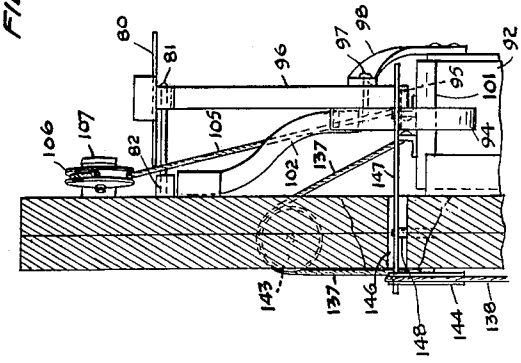


FIG. 5

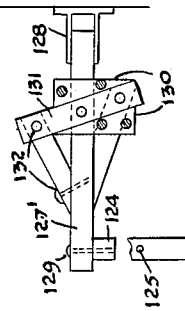


FIG. 6

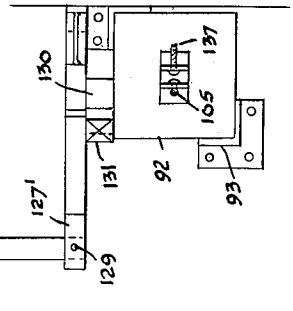
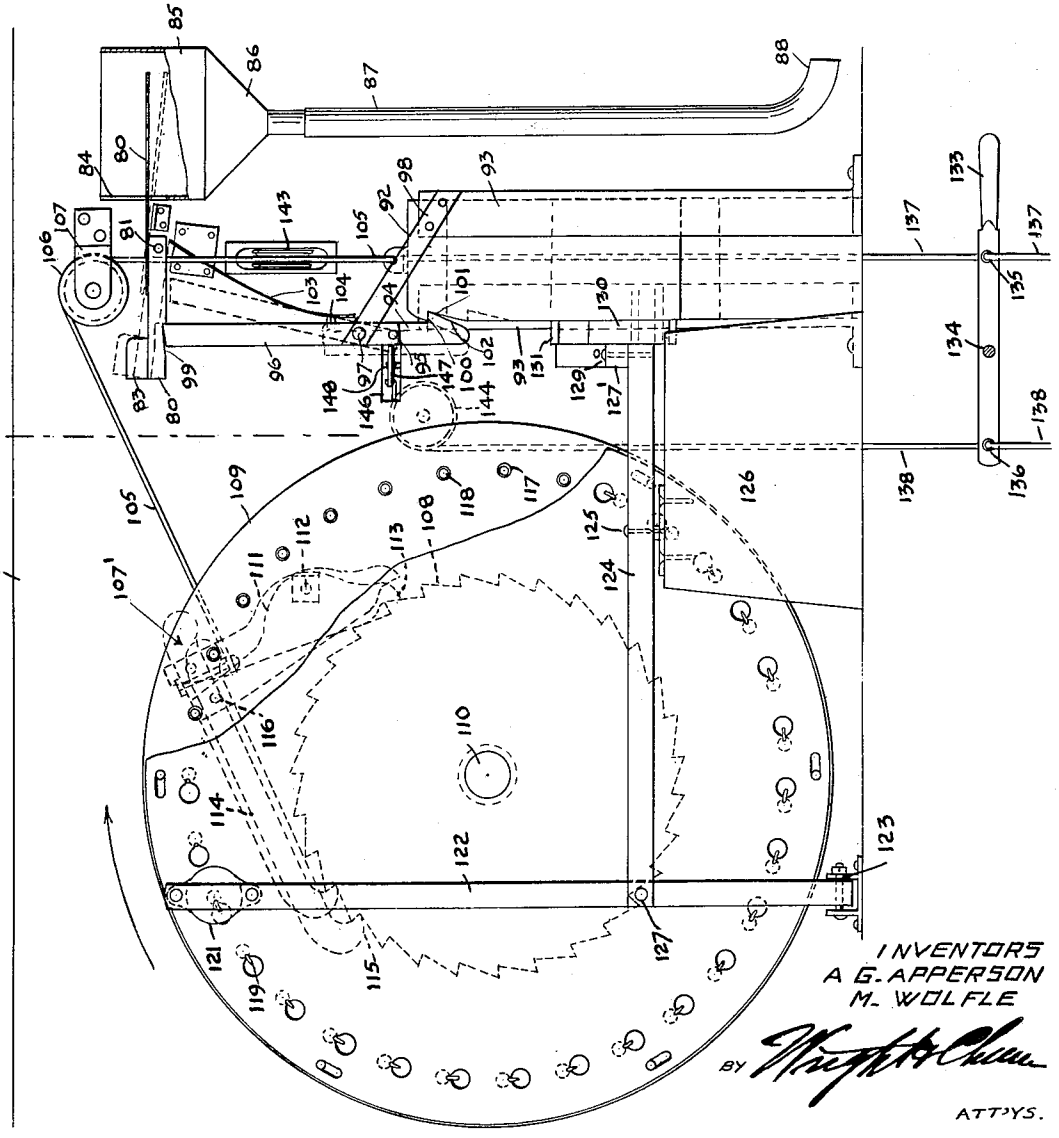


FIG. 3



INVENTORS
A. G. APPERSON
M. WOLFLE
BY Wright & Cheem
ATTYS.

Feb. 26, 1924. 1,484,752

A. G. APPERSON ET AL

AMUSEMENT DEVICE

Filed May 9, 1922 4 Sheets-Sheet 3

FIG. 7

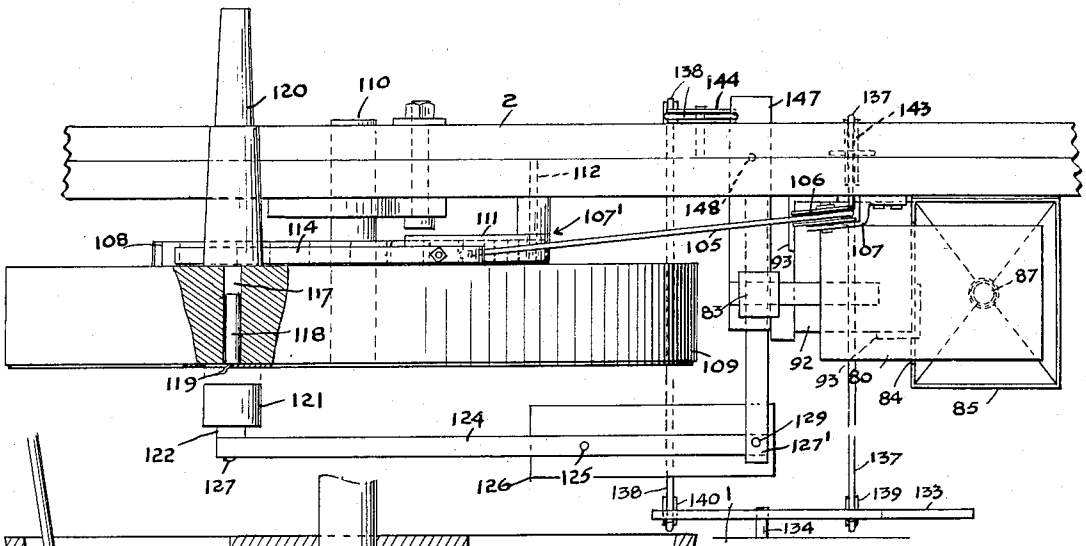


FIG. 8

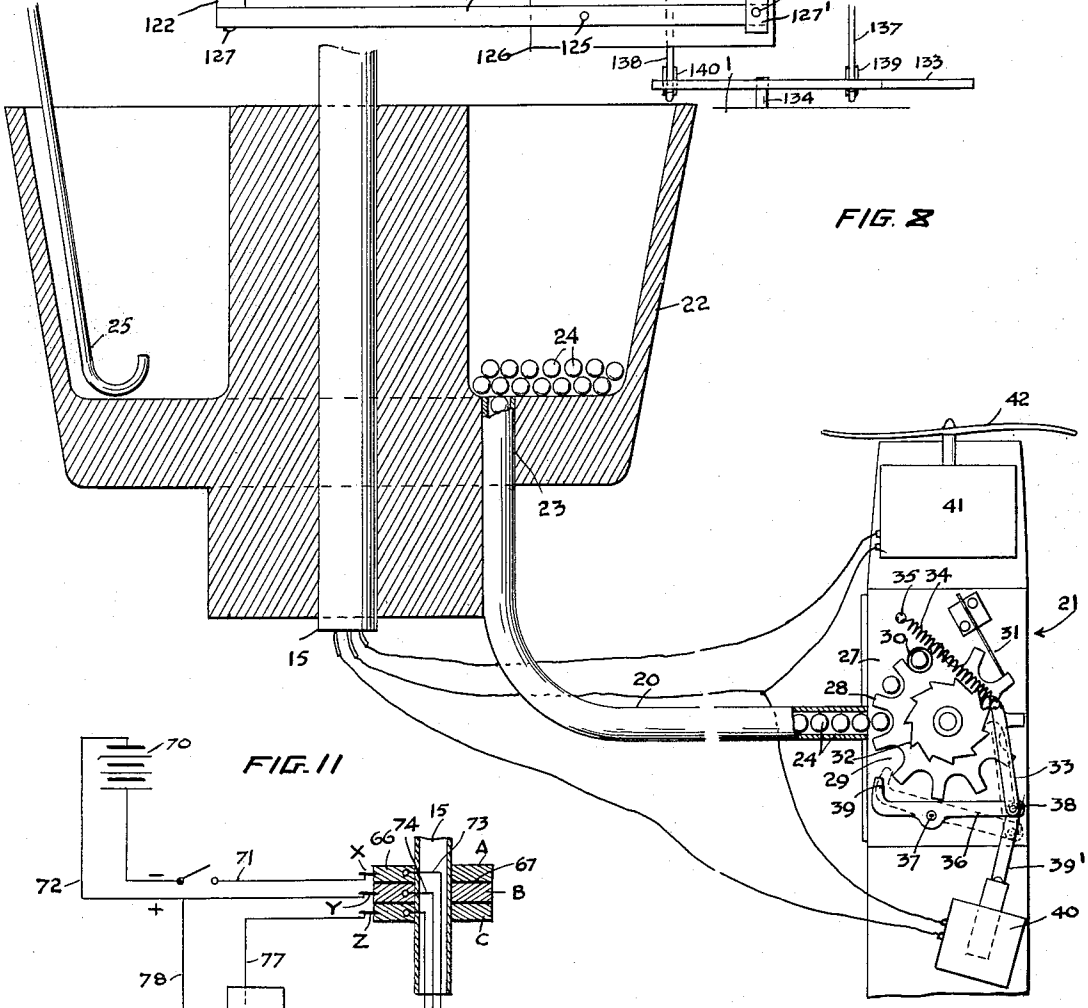


FIG. 11

INVENTORS
A. G. APPERSON
M. WOLFLE
BY Wright & Okes
ATTYS.

Feb. 26, 1924. 1,484,752

A. G. APPERSON ET AL

AMUSEMENT DEVICE

Filed May 9, 1922 4 Sheets-Sheet 4

FIG. 9

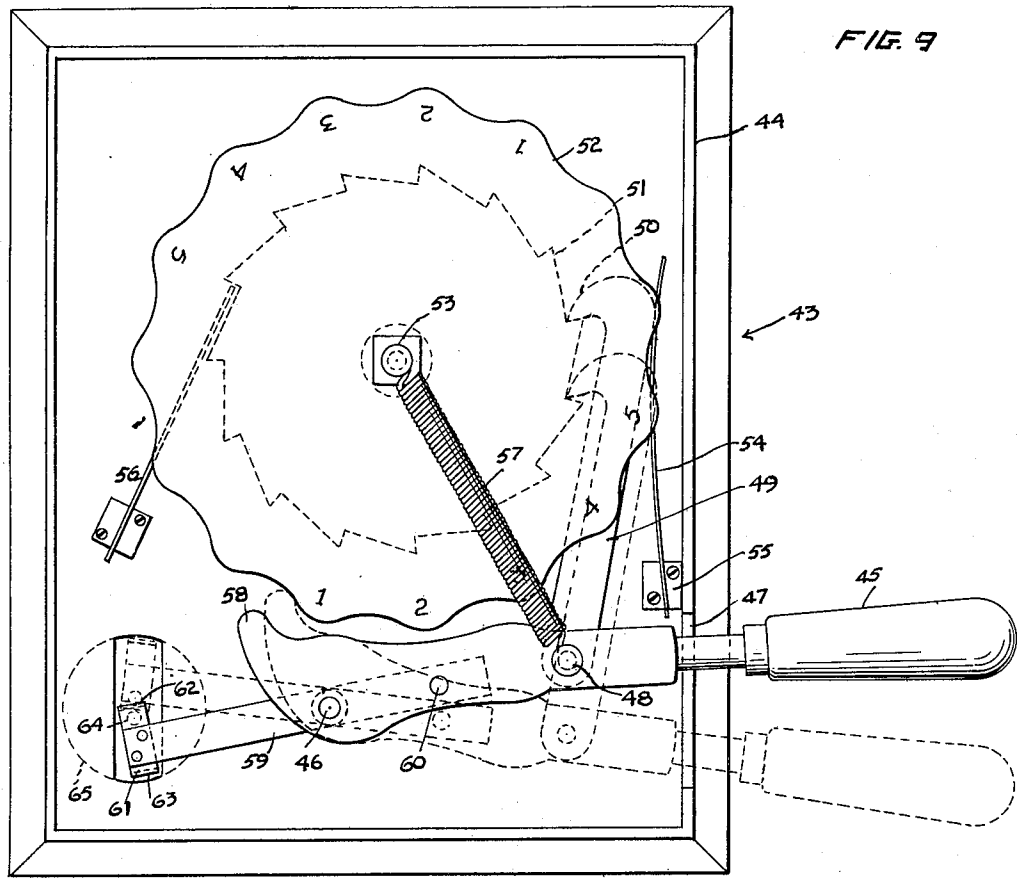
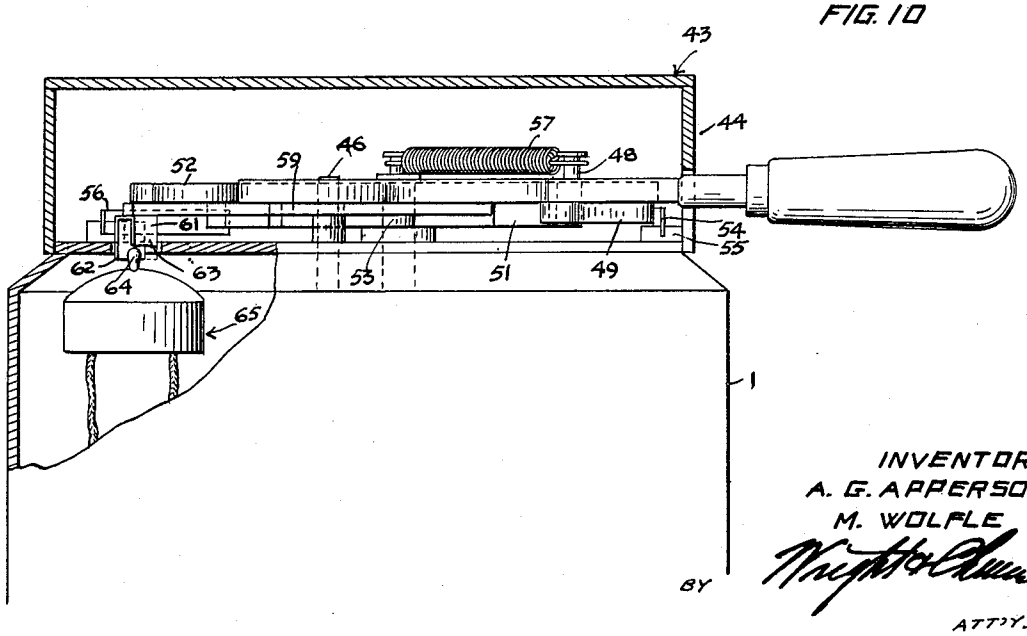


FIG. 10



INVENTORS
A. G. APPERSON
M. WOLFLE
BY
ATTYS

Patented Feb. 26, 1924. 1,484,752

UNITED STATES PATENT OFFICE.

ALVIE G. APPERSON AND MATHEW WOLFLE, OF SAN FRANCISCO, CALIFORNIA.

AMUSEMENT DEVICE.

Application filed May 9, 1922. Serial No. 559,661.

To all whom it may concern:

Be it known that we, ALVIE G. APPERSON and MATHEW WOLFLE, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Amusement Devices, of which the following is a specification.

This invention relates to amusement devices of the type such as employed at amusement parks, carnivals, street fairs and the like, and has particular reference to a novel game and amusement apparatus which requires skill in the playing and also takes into consideration an element of chance.

An object of the invention is to provide amusement apparatus which will include a plurality of toy airplanes and such scenery as will represent a fleet of planes circling over, for example, a body of water with ships, forts, islands and light-houses thereon, the operation of the apparatus or the playing of the game consisting in causing the various objects disposed in the scenery to be "bombed" by the airplanes, there being mechanism by means of which the player or players may, at will, cause missiles simulating bombs to be dropped from the airplanes.

A further object of the invention is to provide apparatus of the character described which will provide realistic effects and cause an audible report simulating the firing of a cannon or gun when a "hit" is made.

Another object of the invention is to provide apparatus of the character described which is arranged so that a great number of persons may play the game at the same time without interference or confusion.

The invention possesses other advantages and features some of which, with the foregoing will be set forth at length in the following description where we shall outline in full that form of the invention which we have selected for illustration in the drawings accompanying and forming a part of the present specification. In said drawings we have shown one form of the construction of our invention, but it is to be understood that we do not limit ourselves to such form since the invention as expressed in the claims may be embodied in a plurality of forms.

Referring to the drawings:

Fig. 1 represents a sectional view partly in side elevation of the apparatus of our invention, parts being removed for the sake of clearness of illustration.

Fig. 2 represents a top plan view of the principal visible elements of the apparatus, parts of which are broken away.

Fig. 3 represents an enlarged side elevation broken away in part, of the means for automatically producing a light report coincident with the making of a "hit."

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a detail view of part of the mechanism shown in Fig. 3.

Fig. 6 is a top plan view of the mechanism shown in Fig. 5.

Fig. 7 is a fragmentary plan view of the mechanism shown in Fig. 3.

Fig. 8 is a sectional view partly in elevation and broken away showing the bombing apparatus as associated with the airplanes and means for rotating the planes.

Fig. 9 is a top plan view of the actuating mechanism such as would be mounted at the counter.

Fig. 10 is a fragmentary sectional view showing the mechanism in side elevation.

Fig. 11 is a diagrammatic view of the electrical circuit for one of the airplanes.

Referring particularly to the embodiment of the invention shown in the drawings, 1 represents a counter at which players of the apparatus will stand, 2 the scenery and target unit of the apparatus, 3 the airplane unit, 4 the support for the airplane unit. In practice the apparatus is preferably set up within a small stand or booth, such as commonly employed at amusement parks, resorts and the like, the counter 1 being a part of the stand or booth as well as the structure 4 for supporting the airplane unit. This arrangement may be varied as desired depending upon the conditions of installation of the apparatus, but preferably includes steps 5 leading up to the supporting means or platform 4.

The scenery and target unit 2 comprises essentially a landscape or water scene having objects such as ships, forts, houses, etc., which constitute the targets, although we may use any other kind of scenery or type of target, as desired. We prefer, as shown, a tank 6, preferably circular, having water therein and mount at various points within the tank, targets such as a ship 7, lighthouse 8, islands 9 and forts 10. This tank

6 will be disposed behind the counter 1 in such position that the mechanical parts of the apparatus are hidden from view to persons standing in front of the counter 1. Outside of the tank adjacent to the outer wall thereof at spaced points, are a plurality of target or "hit scoring" devices, there being as shown, four of these devices designated 11, 12, 13 and 14, respectively. The targets are so arranged as to conceal the mechanisms 11 to 14 inclusive. Each target mechanism is disposed behind a target so as to give the impression that the target is hit by the missile, as will be later described. In reality the said missile or bomb will, if properly released, strike one of the target mechanisms and in no instance will drop within the tank.

The airplane unit 3 comprises a vertical shaft 15, journaled and suspended in a suitable bracket bearing 16, attached to a supporting structure 17. This shaft is driven by a motor 18 with suitable gearing 19, and extends below the support 4 to a point over the central portion of the tank 6, but well above said tank. Any suitable means may be employed to conceal the lower portion of the shaft and mechanism associated therewith and it is thought unnecessary to illustrate this arrangement. The lower portion of the shaft has a plurality of radially, preferably tubular, supporting arms 20 extending therefrom substantially horizontally. Upon the outer end of each arm is a minature airplane 21. There may be as many of these planes as desired, say for example, from five to twenty. The arms are of such lengths that the planes will be disposed above the outer wall of the tank 6 whereupon when the planes are rotated, they will traverse a path concentrically with but spaced outwardly from the outer wall of the tank 6. The planes will be arranged so that they will be visible to the players of the game standing in front of the counter 1 and are preferably several feet above the apparatus 2.

The bombing means includes the tubular arms 20 and a bomb hopper 22, which latter is fixed to the lower part of and rotatable with the shaft 15. The arms 20 are bent so as to extend upwardly as at 21 at their inner ends and engage in openings 23 formed in the bottom wall of the hopper 22, the upper ends of the portions 22 and said arms being flush with the inner surface of the hopper. A plurality of metal balls 24 are mounted in the hopper so that they will readily gravitate into the upwardly directed portions 23 of the arms 20 and pass thru the arms, which are slightly downwardly inclined to the airplane. To prevent the balls from jamming or wedging within the hopper a member 25 is extended into the hopper so as to act as a stirring element, said member being fastened to the support 4 as at 26 at its upper end. It will thus be seen that the tubular arms 20 are at all times filled with the metal balls.

The outer ends of the arms 20 are so attached to the mediate portions of the bodies of the airplanes 21, that said balls will be discharged into chambers 27 provided on the bodies of the airplanes. Mounted on each airplane body is a notched wheel 28, the notches 29 of which are adapted to be moved past the discharge end of the arm 20 so as to receive therein the balls 24, the movement of the wheel causing the balls to be carried in the notches to points opposite the discharge opening 30 in the body of the airplane, the balls dropping through said discharge opening 30 clear of the airplane. This operation simulates the dropping of bombs. The wheel 28 is held against movement by a spring detent 31, which engages with the perimeter of the wheel 28. In order to provide for movement of the wheel to bring one of the notches therein containing one of the balls over the discharge opening, the wheel has fixed upon its upper side a ratchet wheel 32. A pawl 33 cooperates with the ratchet wheel so that when pulled will turn the ratchet and notched wheels a distance equal to substantially the width of one notch. One end of the pawl is attached to a retractile spring 34 and the other end of the spring is attached as at 35 to the body of the airplane, said spring being arranged so as to hold the pawl in engagement with the ratchet wheel and to resist pulling movement of the pawl as is required for operating the ratchet. A lever 36 is pivoted as at 37 intermediate of its ends upon the airplane body, and one end thereof is pivoted as at 38 to the other end of the pawl. The other end of the lever is bent inwardly to provide a detent 39 which is adapted to extend into the notches to limit the movement of the notched wheel upon each operation of the pawl. The armature 39′ of a solenoid magnet 40 is connected with the lever 36 by means of the pivot 38 so that when said magnet is energized the lever 36 is rocked and the pawl is given a pull such as will cause the notched wheel to turn. The magnet is energized by operating means selectively employed by the operators or players of the game, said means to be hereinafter described. To render the planes more realistic a small motor 41 may be mounted on each plane and arranged to continuously drive the propeller 42.

The operation of the bomb or pawl releasing mechanism on the airplane is provided for by a plurality of actuating devices 43 which are mounted upon the counter 1 and accessible to persons operating the mechanism or in other words, playing the

game. Preferably each airplane will be numbered or lettered, or otherwise given some special designation clearly visible to the players and the operating devices 43 on the counter will be correspondingly designated, there being one for each airplane. This is necessary in order that the players may pick out the particular airplane with which to carry out the bombing of a certain target or targets.

Each of the devices 43 comprises a container or box 44, in which circuit closing mechanism is mounted. This mechanism comprises an operating lever 45 which is pivoted intermediate of its ends as at 46 in the box 44 and extends outwardly from the box through an opening 47 in one side wall thereof. Pivoted at one end to a mediate part of the lever as at 48 is a pawl 49, the hook end 50 of which is adapted to cooperate with a ratchet wheel 51, which wheel is fixed to the under side of the notched or serrated wheel 52, both wheels having a common rotatable mounting 53. A leaf spring 54 is fixed to the box as at 55 and presses against the perimeter of the notched or serrated wall 52 so as to prevent accidental movement of said wheel and maintain the same under tension at all times. A similar leaf spring 56 is disposed on the other side of the box so as to engage the ratchet wheel 51. A retractile spring 57 is attached at one end to the box and at its other end to the lever 45 so as to normally hold said lever in operative position. The inner end of the lever is bent to provide a detent or stop member 58 which is adapted to engage the notches or serrations 52 to limit movement of the wheel each time the lever is actuated. The mechanism above described is primarily for the purpose of registering the number of plays made by the operator or player of the game. The circuit closing means more particularly comprises an arm 59 fixed as at 60 to the lever and extending beyond the inner end thereof. To the outer end of this arm is attached an inverted U-shaped member 61 and between opposite side or arm portions 62 and 63 thereof a switch lever 64 is disposed. The switch lever 64 extends upwardly from a standard type of circuit closing device 65 which is mounted beneath the member 61, and need not be illustrated in detail. When the switch lever 64 is moved in one direction, the circuit is closed, and in the other direction, the circuit is opened. Thus, when the lever 45 is grasped and moved from left to right as shown in Fig. 9, the arm 63 of the member 61 will engage the switch lever 64 and operate the circuit closing means so as to close the circuit for the operating magnet or solenoid 40 on the airplane associated with the particular actuating mechanism. When the lever is thus rocked to its dotted line position as shown in Fig. 9, the pawl 49 through the ratchet wheel 51 moves the wheel 50 one notch and when the lever is released the spring returns it to former position and in so moving causes the side 63 of the member 61 to engage and move the switch lever 64 so as to open the circuit for the magnet 40 thereby restoring the mechanism to normal position. The wheel 51 is a tally wheel and has opposite the notches therein, numbers from one to five, or otherwise as desired. These numbers are preferably arranged so that they are visible and readable to both the players and attendant standing in front of and behind the counter respectively. Any suitable arrangement of this sort may be adopted, but preferably that shown in Fig. 9.

The electrical circuit for operating the airplane motors and solenoids 40 to actuate the bomb releasing mechanism is illustrated in detail in Fig. 11 of the drawings and includes a plurality of discs 66 mounted upon the shaft 15 and insulated from one another by insulation elements 67. For the sake of convenience in desoribing the discs as a part of the circuit, the first three are designated A, B and C, as shown in the drawings. Three discs are required for each airplane. Mounted close to but spaced from the discs is a frame 68 which carries a plurality of brushes 69, three of which are designated X, Y and Z, for convenience of description. The brushes contact with the discs so that an electrical connection is made between the revolving discs and stationary parts and transmission of the current may be made to the respective airplanes. The diagrammatic view discloses a complete circuit as provided for one airplane only and since the manner in which the other planes are connected in the circuit will be readily apparent, no further illustration is necessary. From one side of a source of electrical energy 70 a conductor 71 leads and is connected with the brush X, which makes electrical contact with the disc A. From the other side of the source of energy, a conductor 72 leads to the brush Y, which contacts with the disc B. The shaft 15 is hollow and conductors 73 and 74 are connected respectively with the discs A and B, extend downwardly through the shaft and from thence along said arms 20 to the propeller motor of the airplane. This completes the circuit for the airplane motor, which motor will run continuously when the airplanes are moved over the targets. By making suitable connections with the other discs and conductors 71 and 72, the other airplanes may be likewise electrically connected, it being thought unnecessary to illustrate this. Leading from the conductor 73 is a conductor 75 which is connected with the solenoid 40. The other side of the circuit for the solenoid has one

of the actuating devices 43 connected in series therewith and includes a conductor 76 which extends along side the conductors 73 and 74 through the hollow shaft and is connected with the disc C. The brush Z contacting with the disc C is connected with the circuit closer 65 by means of a conductor 77. A conductor 78 leads from the circuit closer 65 and is connected to the conductor 72, thus completing the circuit for the solenoid 40. This circuit, however, is opened and closed by the circuit closer 64, which is in turn operated by the lever 45. It will thus be seen that by means of the plurality of operating devices 43, the circuit for the solenoid 40 of any one of the airplanes may be closed at will so as to cause the bomb releasing mechanism to drop a bomb at the will of the operator.

The trigger mechanisms 11 to 14 inclusive are identical as to construction. Each comprises a lever-like trigger 80 pivoted intermediate of its ends as at 81 to a bracket 82 extending outwardly from the upright wall of the tank 6. A counter weight 83 is provided on one end of the lever so as to overbalance said lever and tend to force one end downwardly at all times and the other end of the lever extends through a recess 84 in the side of the hopper 85. The hopper 85 is provided with a tapered bottom 86 extending downwardly from which is a tubular member 87, the balls or bombs, if properly directed will strike the last named end of the lever 80 and the weight thereof will depress the lever causing it to rock as shown in dotted lines in Fig. 3, the balls thereafter dropping into the hopper and passing through the pipe 87 through the lower curved end 88 of the pipe onto an inclined runway 89. This runway extends around the tank and its lowermost point is at the rear of the tank. A wall 90 surrounds the tank in spaced relation thereto so as to form with the wall of the tank and the runway, a channel for the balls. At the rear side of the tank the wall 90 is provided with an opening 91 which provides for rolling of the balls off of the runway to a point where they may be collected by an attendant of the apparatus.

The trigger when released sets into operation mechanism which will cause a loud report to be made simulating the report of a gun or cannon. The prime mover for this mechanism is a weight 92, there being a weight for each of the trigger mechanisms 11 to 14 inclusive. In each mechanism the weight is mounted to vertically slide in a guide 93 and is held in set or up position so that when released it will drop and thereby actuate the said mechanisms as will be later described. The means for holding the weight in up position comprises a short lever 94 pivoted intermediate its ends as at 95 to the lower end portion of an upright lever 96. The lever 96 is pivoted at a point above the pivot 95 as at 97 to a bracket 98 carried by the guide 93. The upper end of the lever is adapted to engage in a notch 99 formed in the trigger 80 so as to hold said trigger in set position. The lower end of the lever 94 is provided with a shoulder 100 adapted to cooperate with notches 101 in the adjacent side of the weight 92 and is also formed with a cam face 102 which will permit of the weight being moved past the said end of the lever such that the notches 101 may be engaged with said shoulder. A leaf spring 103 fixed at its upper end to the side wall of the tank bears against an abutment member 104 on the upper end of the short lever 94 and also engages at its lowermost point a mediate portion of the short lever below the pivot 95. When the trigger is rocked and disengaged from the lever 96, the spring, in pressing outwardly on the short lever, will cause said lever to move bodily outwardly free of the weight and the longer lever will be rocked and moved to a position shown in dotted lines in Fig. 3, whereupon the weight 92 will be released.

Extending from the upper end of the weight is a flexible element 105, which passes upwardly and over a pulley 106 mounted in a bracket 107 disposed in the outer face of an upright wall of the structure. From the pulley 106 the flexible element extends to and is connected with mechanism generally designated 107′, which mechanism cooperates with a ratchet wheel 108 fixed to a larger wheel 109. The wheel 109 is mounted upon a shaft 110 suitably journaled between the tank and wall 90. The mechanism 107′ comprises a lever 111, which is pivoted intermediate of its ends as at 112 to a suitable support. The flexible element 105 is secured at one end of this lever so that when a pull is communicated thru said flexible element the lever will be rocked. One end of the lever is arranged to provide a detent 113, which latter will engage the periphery of the ratchet wheel 108 to limit the movement of the ratchet wheel. A pawl 114 having a hooked end 115 cooperating with the ratchet teeth, is pivoted as at 116 at its other end to the lever 111, whereby when the lever is rocked the pawl will pull on the ratchet wheel so as to rotate the same and cause the wheel 109 to be turned correspondingly. The wheel 109 is provided with a plurality of openings 117 extending transversely therethru adjacent its periphery. These openings are adapted to receive detonating devices, such as fire-crackers 118. The fire-crackers are so arranged that the fuses 119 will project from one side face of the wheel. A miniature gun or cannon 120 is carried by the tank wall and arranged so that it will be visible from in front of the

counter 1. The breech end of the gun is disposed in close proximity to one side of the wheel 109 whereby the opening in the breech will register with openings 117 and upon the explosion of the fire-crackers, smoke will issue from the muzzle of the gun. The openings for the fire-crackers are so arranged that upon each dropping of the weight the mechanism 107′ will function to move the wheel so as to bring one fire-cracker into position opposite the gun or cannon 120.

The fuse igniting means comprises an electrically heated device 121 of any suitable character but such that it will produce sufficient heat to ignite the fuses 119. This device is carried upon one end of a lever 122 and is normally spaced outwardly from the side of the wheel 109 at which the fuses 119 are disposed. The lever 122 is pivoted at its lower end to the floor or other support as at 123 and is adapted to swing towards and away from the wheel 109. A lever 124 extending horizontally or at right angles to the lever 122 is pivoted intermediate of its ends as at 125 to a support or bracket 126 and at one end is pivoted as at 127 to a mediate portion of the lever 122. When the lever 124 is rocked the lever 122 is moved back and forth so as to bring the igniting device 121 into and out of position, whereupon it will ignite the fuse of the fire-cracker. The lever 124 is actuated by a slide member 127′ which is mounted in a slidable guide 128 attached to an adjacent wall of the structure. Attached to the weight 92 is a cam device 130 which cooperates with an inclined slide member 131 in turn fixed as at 132 to the slide member 127′. When the weight drops the cam device causes the member 127′ to be pushed outwardly and to rock the lever 124 in such manner that the lever 122 will cause the igniting device 121 to engage the fuse of the fire-cracker and ignite the fuse. When the weight is raised the cam device will detract the device 127′ and rock the lever 124 so as to move the device 121 out of igniting position. There is provided means for returning the weight of each trigger mechanism and its associated parts to normal position, this means being operated by a hand lever 133 which is pivoted as at 134 to a point on the rear side of the counter 1. Attached to the lever as at 135 and 136 are flexible elements 137 and 138 which extend downwardly from the lever around pulleys 139 and 140 and then horizontally from said pulleys to similar pulleys 141 and 142 respectively, located in a space between the tank wall and wall 90. From the pulleys 141 and 142 the elements 137 and 138 extend upwardly, the one 137 around a pulley 143 and the one 138 around a similar pulley 144. The pulley 143 is mounted in the upright structure of the tank and after passing over said pulley the cable or flexible element 137 extends downwardly to and is connected with the upper end of the weight 92. Thus, it will be seen that the element 137 serves as a means for lifting the weight into set position. The pulley 144 is mounted on said wall adjacent to a transverse opening 146 formed thru said wall. The cable 138 passes over the top of the pulley 144 and is connected with one end of a lever 147. The lever 147 extends thru the opening 146 and is pivoted to the wall as at 148, within the opening. The side edge of the lever is adapted to engage the lower portion of the trigger lever 96 and intermediate portion of the short trigger lever 94 whereupon when a pull is communicated thru the flexible element 138 such as will cause the free end of the lever 147 to move towards the trigger levers said trigger levers will be moved into set position.

Mounted on the wheel 109 is a disc 150 which is provided with a plurality of slots 151 near its periphery, the slots receiving pins 152 projecting from the wall, whereby movement of the disc 150 is limited. The disc is provided with a plurality of openings 153 adapted to be moved into and out of registration with the openings 117 for the fire-crackers. In loading the wheel with fire-crackers, the disc is moved to bring the openings into registration and after loading is moved into position shown in Fig. 3, so as to almost entirely cover the openings 117, there being left a small space sufficient to permit the fuse of the fire-crackers to project outwardly from the disc.

We claim:

1. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a counter behind which said elements are arranged to be visible from a point in front of the counter, a plurality of toy airplanes, means for rotatably supporting said airplanes in a position such that they may be moved over the targets and are visible from in front of the counter, means for moving said airplanes, means for delivering to each airplane a plurality of missiles, one at a time, and means operable from the counter for releasing the missiles one at a time from one or more airplanes as desired at the will of the operator.

2. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a counter behind which said elements are arranged to be visible from a point in front of the counter, a plurality of toy airplanes, means for rotatably supporting said airplanes in a position such that they may be moved over the targets and are visible from in front of the counter, means for

moving said airplanes, means for delivering to each airplane a plurality of missiles, one at a time, missile releasing means, means operable from the counter for controlling the operation of the missile releasing means at will and means for causing a loud report to be made including trigger mechanism arranged with relation to the targets so as to be operated when struck by a missile dropped from an airplane.

3. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a counter behind which said elements are arranged so that they are visible from a point in front of the counter, a plurality of aerial vehicles mounted over the targets, means for supporting and moving said aerial vehicles over the targets such that they will be visible during such movement from a point in front of the counter, means for supplying to each aerial vehicle a plurality of missiles, means in each aerial vehicle for releasing the missiles and means controllable at the counter and arranged so that one or more releasing means of the vehicles may be independently or simultaneously actuated.

4. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a counter behind which said elements are arranged so that they are visible from a point in front of the counter, a plurality of aerial vehicles mounted over the targets, means for supporting and moving said aerial vehicles over the targets such that they will be visible during such movement from a point in front of the counter, means for supplying to each aerial vehicle a plurality of missiles, means in each aerial vehicle for releasing the missiles, means controllable at the counter and arranged so that one or more releasing means of the vehicles may be independently or simultaneously actuated, a plurality of trigger mechanisms associated with the target elements so that they may be struck by the missiles and moved when so struck and means operating when the trigger mechanism is operated to produce a loud noise simulating the report of a gun.

5. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a plurality of toy aerial vehicles, a rotary member disposed above the target elements, a plurality of tubular supporting arms extending from the rotary member and supporting the aerial vehicles so that they will be rotated over the targets, a plurality of missiles simulating bombs, a container on said rotating member in which said missiles are carried, said tubular arms having communication with the container and arranged so that the missiles will gravitate through said arms to the aerial vehicles and means controllable from a stationary point for releasing the missiles from the aerial vehicles.

6. Amusement apparatus comprising a plurality of target elements constructed to simulate buildings, ships or other structures, a plurality of toy aerial vehicles, a rotary member, arms extending from the rotary member and supporting said aerial vehicles in such manner that the vehicles will be moved over the targets upon rotation of the rotary member, means for rotating the rotary member, a plurality of missiles and means including said arms for delivering the missiles to the vehicle, means on each vehicle for releasing the missiles, one at a time, and means controllable from a stationary point for actuating said releasing means at will.

7. In amusement apparatus of the character described a plurality of target elements simulating buildings, ships or other structures, a plurality of toy aerial vehicles, means for supporting said vehicles in position above said target elements, means for moving said aerial vehicles, a plurality of missiles simulating bombs, means for feeding missiles to the respective aerial vehicles, means controllable from a stationary point for releasing at will a missile from any one of the vehicles, trigger mechanism associated with the target elements and adapted to be struck by the missiles, a rotary member having a plurality of fused detonating devices thereon, a fuse igniting member and means operating when each trigger mechanism is operated for moving the igniting means and the means supporting the detonating device such that the fuse on one of said detonating devices will be ignited and a loud report will be made coincident with the striking of the trigger mechanism.

8. In amusement apparatus of the character described a plurality of target elements simulating buildings, ships or other structures, a plurality of toy aerial vehicles, means for supporting said vehicles in position above said target elements, means for moving said aerial vehicles, a plurality of missiles simulating bombs, means for feeding missiles to the respective aerial vehicles, means controllable from a stationary point for releasing at will a missile from any one of the vehicles, trigger mechanism associated with the target elements and adapted to be struck by the missiles, a rotary member having a plurality of fused detonating devices thereon, a fuse igniting member, means operating when each trigger mechanism is operated for moving the igniting means and the means supporting the detonating device such that the fuse of one of said detonating devices will be ignited and a loud report will be made coincident with

the striking of the trigger mechanism and means for returning the last named means to normal position.

9. In amusement apparatus a plurality of target elements simulating buildings, ships and other structures, a plurality of toy aerial vehicles, a rotary member, a plurality of tubular arms connected with and extending outwardly from the rotary member and supporting the aerial vehicles, a hopper on the rotary member into which said tubular arms extend, a plurality of missiles in the form of balls contained in the hopper and adapted to gravitate through the tubular arms of the aerial vehicle, a discharge opening through which the missiles are dropped in each vehicle, a notched wheel on each vehicle for receiving missiles from the arm moving them over each discharge opening, electro-magnetic means for actuating said notched wheel, and electrical circuit for said means and a circuit closer located at a stationary point whereby when closed, the electro-magnetic means will actuate the notched wheel and cause a missile to be dropped, there being a circuit and circuit closer for each aerial vehicle.

10. In amusement apparatus a supporting structure, a trigger pivoted upon the supporting structure adapted to be engaged and rocked by a missile dropped thereon, means for dropping missiles upon the trigger, a hopper into which one end of the trigger extends and through which the missiles pass after rolling off of the trigger, a weight member normally held in suspended position, means actuated upon rocking of the trigger for releasing the weight member and means operated when the weight member falls for causing a report to be made simulating the report of a gun.

11. In amusement apparatus a supporting structure, a trigger pivoted upon the supporting structure adapted to be engaged and rocked by a missile dropped thereon, means for dropping missiles upon the trigger, a hopper into which one end of the trigger extends and through which the missiles pass after rolling off of the trigger, a weight member normally held in suspended position, means actuated upon rocking of the trigger for releasing the weight member, means operated when the weight member falls for causing a report to be made simulating the report of a gun and means for returning the weight member and trigger mechanisms to normal position.

12. A plurality of target elements constructed to simulate buildings, ships, or other structures, a counter behind which said elements are arranged so that they are visible from in front of the counter, a plurality of aerial vehicles, means for moving said aerial vehicles over the targets, a missile in each aerial vehicle, means in each aerial vehicle for releasing the missile and means controllable from the counter for actuating one or more releasing means independently or simultaneously at the will of the operator.

ALVIE G. APPERSON.
MATHEW WOLFLE.