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AMUSEMENT TARGET STRIKING DEVICE WITH BOMBSIGHT

Angelo Giuliano, 754 Mace Ave., Bronx 67, N.Y.

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1 Claim. (Cl. 273-101)

The invention relates to amusement target striking devices and relates more particularly to free fall amusement striking devices.

It is among the principal objects of the invention to provide an amusement device for sighting, aiming, and releasing a projectile for free fall, towards a target on a rotating turntable.

With the above and other objects of the invention in view, the invention consists in the novel construction, arrangement and combination of various devices, elements and parts, as set forth in the claim hereof, one embodiment of the same being illustrated in the accompanying drawings and described in the specification.

The foregoing and other objects of the invention will be best understood from the following description of one exemplification thereof, reference being had to the accompanying drawings, wherein:

FIG. 1 is a plan view of an amusement device in accordance with the invention;

FIG. 2 is a fragmentary vertical sectional view, taken on the line 2-2 of FIG. 1;

FIG. 3 is a fragmentary sectional view, taken on the line 3-3 of FIG. 1;

FIG. 4 is a large scale fragmentary sectional view similar to FIG. 3, but showing only a detail thereof; and

FIG. 5 is a perspective view of the amusement device.

In carrying the invention into effect in the single embodiment which has been selected for illustration in the accompanying drawings and for description in this specification and referring now particularly to FIGS. 1 and 5, there is provided a projectile carrier such as a peripherally stationary air vehicle 10 supported above a lower member such as a turntable 12 on which there is displaced a target 14. The air vehicle 10 may be of metal or plastic and be a model airplane, as shown, or any other suitable airborne vehicle such as a model balloon, or model missile, rocket, or the like.

The target 14 need not be permanently secured to the turntable 12 but may be removable in order that a variety of targets may be placed or secured, or painted on the turntable 12. The turntable may have, as shown, painted on its surface a variety of targets 14, such as trains 16, battleships 18, factories 20 or a bridge 22. The target 14 will move with the turntable 12 in a predetermined circular path at a predetermined slow speed. The turntable 12 is driven by a drive mechanism such as a spring motor (not shown) that is housed in a base 23. A key 70 is provided to wind the spring motor, and an "on-off" lever 78 is provided on the base 23 to start and stop the rotation of the turntable 12.

The model airplane 10 is supported on the base 23 by an off-center rod 25. The airplane 10 includes an upright bomb-rack or receptacle 24, within its fuselage 26 (FIGS. 1 and 2), in which there are releasably stored bombs or projectiles 28.

A sighting means, such as a bomb sight 30, is borne by the airplane 10. The bomb sight 30 includes range finder means 32 (FIG. 1) and an objective 34 affording the operator (the child playing with this amusement device) to view optically the moving target 14, and, by moving the objective 34 in either of the directions of arrows 31 and 33 to gauge the distance of the target from the striking point below the receptacle 24 and thereby to determine the optimum instant a projectile 28 should be released. A release means 36 is connected

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to the bomb-rack 24 as seen in FIG. 3. The release means 36 is manually actuatable to release a projectile 28 from the bomb-rack 24 for subsequent descent of the projectile in a free fall towards the turntable 12 to strike the target 14 thereof.

As best shown in FIGS. 3 and 4, the release means 36 includes control means 38 that in turn includes retaining means such as a resilient wedge means 40 and a gate means such as a gate 42. The resilient wedge means 40 retains the projectiles above the lowermost projectile 46, to allow only the lowermost projectile to fall on to the target 14 when the gate 42 is opened. The bomb-rack 24 stores all of the projectiles 28 with the aid of the gate 42.

The wedge means 40 includes a resilient member or flat spring 48. The spring 48 is attached to a side 50 of the bomb-rack 24. To the spring 48 there is connected a wedge 52. A wedge 54 attached to a tie rod 56 makes contact with the wedge 52, when the rod 56 is moved upwardly in the direction as shown by an arrow 58. The rod 56 also controls the opening of the gate means 42 through a tie rod 60. The resilient wedge means 40 need not be located as shown in FIG. 3, but may instead be placed higher along the bomb-rack 24 in order to operate, with the gate means 42, to release more than one projectile at a time.

The release means 36 is actuated by a projectile release button 62 (FIG. 3), which may be spring loaded by a spring 64 in order to return the button 62 to its original position for the next operation. In addition, the spring 64 acts through linkages, hereinafter described, to keep the gate 42 closed.

The operation of the invention is as follows:

The projectiles 28 are inserted in the bomb-rack 24. The "on-off" lever 78 is in the "off" position, and the operator will turn the key 70 to wind the spring motor (not shown). A target 14 is connected to or painted on the turntable 12.

The operator will take his place at the bomb sight 30, hold the release means 36, look into the optical member 34 and move the "on-off" lever 78 to the "on" position. This will start the target to turn at a slow rotating speed.

As each target area comes into view in the bomb sight 30, the operator will sight it on the range finder 32 by moving the bomb sight 30 in either of the directions shown by the arrows 31 and 33 to gauge the distance marked on the two scales between the points 0 and 400 and to determine thereby the instant of projectile release.

The operator may release a projectile by pressing the bomb release button 62 against the spring 64. When the button 62 is pushed down, a plunger 90 is pushed down which in turn pushes down a link 92. The link 92 is hinged at a fulcrum point 94 at which point there is connected another link 96. The link 96 will move up on the opposite end to pull the rod 56 up with it. The wedge 52 will also move up, since it is attached to the rod 56, against the wedge 54. The wedge 54 which is located on the spring 48 holds the projectile 98 located at the Number Two position within the bomb rack 24, thus holding back all the projectiles except the projectile 46 that is in the Number One, the lowest position.

As the rod 56 moves up, it also opens the gate means 42 (as best shown in FIG. 4). The opening of the gate 42 allows the projectile 100 in the Number One position to fall from the bomb-rack 24 to strike the target 14 and adhere to it with the aid of a suction cup 102 that is located in the forward portion of the projectile.

The projectile 100 may be made out of metal for weight to help the suction cup 102 to adhere to the target 14.

When the operator releases the button 62, the plunger

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90 will be pushed back by the force of the spring 64. The links 92 and 96 will move back to their original positions to shut the gate 42, and will hold the remaining projectiles within the bomb-rack 24. At the same time, the projectile 98 in the Number Two position will be released to fall into the Number One position. The gate 42 is closed holding all the remaining projectiles in place until the next release.

The target 14 moves in a circular path with the turntable 12, and the drive motor may be so arranged that it turns the turntable 12 in either of the opposite directions of rotation. The objective 34 is movable in opposite directions at right angle to a radius of the circular path of the target 14.

The game may be scored by adding the bomb hits on one bombing run. The smaller the target hit, the higher the score.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus described the invention, what I claim as new and desire to be secured by Letters Patent, is as follows:

An amusement target striking device, comprising a base, a turntable revolubly supported on said base, a

target disposed on said turntable and operable to move therewith in a predetermined circular path at a selective angular speed, a single air vehicle supported from said base in a fixed position above said path and defining a vertical receptacle releasably storing a plurality of projectiles, sighting means borne by said vehicle affording an operator to view optically the moving target and to determine the optimum instant of projectile release, and release means connected to said receptacle including control means manually actuatable to release from said receptacle one projectile at a time for subsequent descent of the released projectile in a free fall towards said path to strike the target, said control means including retaining means operable for holding back all the projectiles above the lowermost projectile in said receptacle when said release means is actuated.

References Cited in the file of this patent

UNITED STATES PATENTS

20	2,286,151	Miller	June 9, 1942
	2,359,383	Pitts	Oct. 3, 1944
	2,452,817	Whipple et al.	Nov. 2, 1948
	2,483,164	Wheeler	Sept. 27, 1949
	2,657,930	Reus	Nov. 3, 1953
25	2,888,004	Steiner	May 26, 1959
	2,932,123	Daugherty	Apr. 12, 1960