PARACHUTE TARGET GAME APPARATUS

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This invention relates to novel target game apparatus involving projected parachute targets, a projecting assembly therefore, and spring-actuated missile projecting hand-guns.

The primary object of the invention is the provision of a highly attractive and amusing apparatus of the kind indicated, which affords players, especially youngsters, opportunity for developing skill and accuracy in shooting, and practice in "quick draws" of the hand-guns, in endeavoring to shoot down projected parachute targets while the targets are parachuting toward the ground, the major components of which are relatively inexpensive and attractive plastic materials, as well as of wood or metal.

Another object of the invention is the provision, in game apparatus of the character indicated above, of targets which involve a simulation of a man having pivoted arms, which are folded down while engaged in the projecting assembly, but swing out as a parachute connected to the arms opens.

A further object of the invention is the provision, in game apparatus of the character indicated above, of an efficient and mechanically superior projecting assembly, which involves projecting spring means, a hand lever for compressing the spring means, and a manually releasable locking member which acts to lock the lever in compressing position as the spring means is compressed, and is adapted to be moved for releasing the lever and permitting the spring means to resile and project the targets.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

FIGURE 1 is a schematic perspective view showing game apparatus of the present invention in operation, the targets being shown folded within the projecting assembly, partly projected therefrom in folded condition, and at the height of their trajectories with their parachutes opened; and hand-guns held by a player and aimed at the descending targets;

FIGURE 2 is an enlarged side elevation partly broken away and in vertical transverse section, showing a target with its parachute open and its arms extended;

FIGURE 3 is an enlarged horizontal section taken through the projecting assembly, on the line 3—3 of FIGURE 1;

FIGURE 4 is a vertical longitudinal section taken on the line 4—4 of FIGURE 3, showing the spring-compressing lever in depressed compressing position and retained therein by the locking member; and,

FIGURE 5 is a vertical transverse section taken on the line 5—5 of FIGURE 4, showing, in phantom lines, a target being projected from the projecting assembly, and the lever in depressing position, in full lines and in elevated released position, in phantom lines.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated game apparatus comprises a projecting assembly 10, adapted to be placed upon a table, a floor, the ground, or other suitable surface. The assembly 10 comprises a support or a longitudinally elongated, preferably rectangular casing having a base or bottom wall 12, end walls 14, front and rear walls 16 and 18, respectively, and a horizontal top wall 20. Suitably fixed to the end walls 14, as indicated, are first and second longitudinally spaced vertical longitudinal partition walls 24 and 26, respectively, which are spaced from the front and rear casing walls 16 and 18, respectively.

Each of the partition walls 24 and 26 is formed, at its rearward side, with a vertical cylindrical launching tube 28, having bottom walls 30, and open upper ends 32. The launching tubes 28 preferably are disposed at slight rearward and upward angles relative to the casing and reach above the top wall 20 thereof, through which they extend.

The walls 34 of the launching tubes 28, as shown in FIGURES 3 and 5, are formed with aligned and diametrically opposed, closed vertical slots 35, spaced from their upper and lower ends, through which a horizontal longitudinal spring depressing bar 36 extends. Disposed in the launching tubes 28 are vertical coil projecting springs 38, which rest upon the bottom walls 30 of the tubes, with end portions of the depressing bar 36 bearing upon their upper ends. Within each launching tube 28 the depressing bar 36 has affixed, on to its upper surface, a transverse guide bar 40 which has enlarged heads 42 and 44, on its ends, which slide vertically in vertical internal grooves 46 and 48, formed in the forward parts and rear parts of the walls of the launching tubes.

An upwardly bowed spring compressing lever 50 extends transversely across the interior of the casing and works through a closed vertical slot 52, provided centrally in the casing front wall 16, in line with the space 54 between the partition walls 24 and 26. The lever 50 is pivoted, at its rear end, on a horizontal axis or pin 56 which extends between a pair of ears 58 suitably affixed to the casing rear wall 18 and spaced above the bottom wall 12, on a level below the lower ends of the launching tube slots 35, and has its upwardly bowed middle portion 60 engaged with the upper side of the compressing bar 36. The casing top wall 20 has fixed thereon, in line with the lever 50, a pendant shock-absorbing coil spring 62, adapted to be engaged by the middle portion 60 of the lever 50, as the lever is forced upwardly by the springs 38. A knob 64 is provided on the forward end of the lever 50.

The first partition wall 24 has, at its longitudinally inward end, a vertical forwardly extending bearing wall 66, secured to the front casing wall 16, which is fabricated with a squared opening 68, on a level above the pivot pin 56, which is longitudinally and horizontally aligned with a squared opening 70, formed in the left-hand casing end wall 14. A latch element or an elongated releasably rectangular cross section spring-pressed locking bolt 72 slides through the openings 68 and 70, and has an enlarged diameter operating knob 74, on its outer or left-hand end, and has a bevelled cam surface 76, at its inner end, which faces upwardly, and, which is adapted to be engaged by the lever 50, as the lever 50 is depressed for compressing the projecting springs 38, the compressing bar 36, so that the bolt 72 is cammed, in a longitudinally outward direction, to permit the lever 50 to pass beneath the bolt 72 and be retained in its depressed position, against the resistance of the projecting springs 38, as shown in FIGURE 5.

The locking bolt 72 is yieldably urged, in a longitudinally inward direction, by a coil spring 78 which is circumposed thereon, and has its inward end anchored to the bearing wall 66, as indicated at 77, and its outer end anchored to the bolt, as indicated at 80. The spring 78 resists outward camming of the bolt 72, as the lever 50 is depressed, and acts to move the bolt 72 inwardly into locking engagement upon the lever 50, as the lever passed below the inner end of the bolt.

For a target projecting operation, targets 82 are dropped...
through the open upper ends 32, of the launching tubes 28 and the lever 59 depressed, by means of the knob 64, until the lever cams the locking bolt 72 out of the way and passes therebelow and is then overridden by the bolt 72 and retained in spring compressing depressed position thereby. In order to project the targets 82 simultaneously out of the launching tubes 28 and put them in upward and rearward trajectories, as indicated in FIGURE 1, the player grasps and pulls out the locking bolt knob 74, whereby the locking bolt is retracted, against the resistance of the spring 78, and releases the lever 59, and hence the projecting springs 59, which raise upwardly and project the targets.

Each of the targets 82 comprises a vertically elongated flat block 84, shaped in the form of a man's body and having weighted lateral circular lugs 86 at its lower end, which fit slidably in a launching tube 28 and serve to center the block 84 concentrically in a launching tube, and to assure that the target retains an erect position in its trajectory. The block 84 terminates, at its upper end, in a reduced diameter head 88. Flat straight, elongated arms 90, shorter than the block 84, are pivoted, as indicated at 92, at the shoulders of the block 84, within the upper ends of vertical lugs 94, formed in the side edges of the block 84, and proportioned to completely receive the arms 90, when in their down-folded positions. The upper ends 96 of the slots 94 serve as stops for the arms 90, in their elevated, extended horizontal positions. The arms 90 have eyes 98 on their outer ends.

A fixed vertical axial rod 100 is fixed on and extends upwardly from the target head 88 and is fixed, at its upper end, to the center of a resilient convex-concave disc 102, which is of substantially the same diameter as the head 88, and has its concave surface 104 facing upwardly. A circular, inverted cup-shaped parachute 106 of flexible, non- resilient material, having a diameter when opened, as shown in FIGURE 2, equal to the reach between the eyes 98, on the outer ends of the arms 90 when in extended positions, is fixed, at its center, as indicated at 108, upon the center of the disc 102. The parachute 106 has a lower edge 110, which has diametrically opposed loops 112 thereon, which are secured through the eyes 98. In order to insert a target 82 in a launching tube 28, the arms 90, and hence the parachute 106, are folded downwardly, so as to readily pass through the launching tube, and place the target blocks 84 upon the upper ends of the projecting springs 38. As the targets 82 reach the upper ends of their trajectories and begin to fall, the parachutes 106 open, as shown in FIGURES 1 and 2, and extend the arms 90 outwardly from the target blocks 84, so that the targets 82 fall at a rate less than gravity would produce, in the absence of the parachutes, so as to afford the player opportunity to shoot down one or both of the targets, with darts 114 projected from a pair of spring hand-guns 116 of conventional form. The darts 114 have resilient enlarged diameter heads 118 for non-injurious contact with the targets.

From the foregoing, it will be seen that the game is initiated by a player, with the hand-guns 116 either holstered, or drawn, by projecting the targets from the projecting assembly 10, the darts 114, operated by himself or by another player, and attempting to shoot down the targets with the hand-guns, before they reach the floor or ground.

Although there has been shown and described a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. Parachute game apparatus comprising a casing hav-
rear walls, said lever means being pivoted on said rear wall, said front wall having a vertical slot through which said lever means extends, said casing having a top wall through which the launching tube extends, said launching tube having a bottom wall upon which the projecting spring rests, a wall of the casing having an opening through which the locking bolt works, said lever means comprising a horizontal spring compressing bar mounted for vertical sliding movement within the casing, and a lever bearing upon the bar and pivoted to the casing rear wall and extending through the front wall slot, said top wall having thereon a pendant shock absorbing spring adapted to be engaged by said lever as the lever is released from compressing position and the projecting spring resiles and moves the lever upwardly toward starting position, longitudinal vertical first and second partition walls extending inwardly from the casing end walls, said launching tube being affixed to said first partition wall, another launching tube affixed to said second partition wall, the walls of the tubes having aligned diametrical slots through which said spring-compressing bar works, said lever working through the space between said partition walls, one of said partition walls having a vertical transverse bearing wall extending laterally therefrom, said bearing wall and an adjacent casing end wall having aligned openings through which said locking bolt works, said spring means comprising a coil spring circumposed on the bolt and anchored at opposite ends to the bearing wall and the bolt, said target comprising a body made to simulate a human and having a head and arms projecting in extended horizontal positions from said body, and said parachute being a flexible inverted cup-shaped parachute surmounting said body and having its center supported from said head and having the outer ends connected to the outer ends of said arms, said arms being movable to downwardly-retracted positions and receivable in slits formed in said body and thereby shift said parachute to collapsed position.

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