

Nov. 24, 1953

M. J. BINKS
PROJECTING DEVICE

2,660,158

Filed April 25, 1951

2 Sheets-Sheet 1

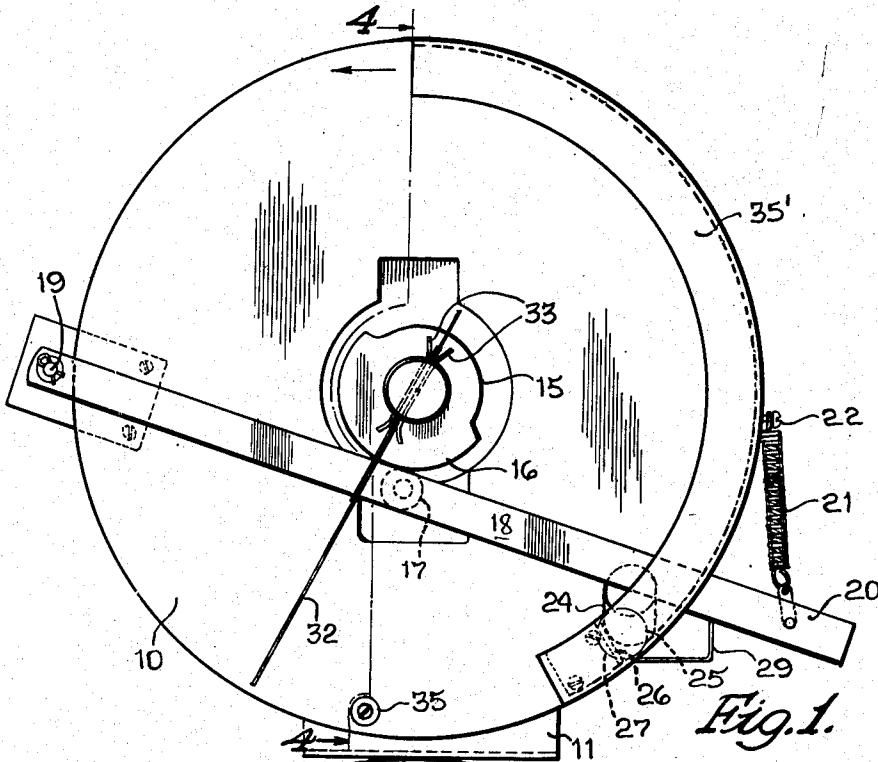


Fig. 1.

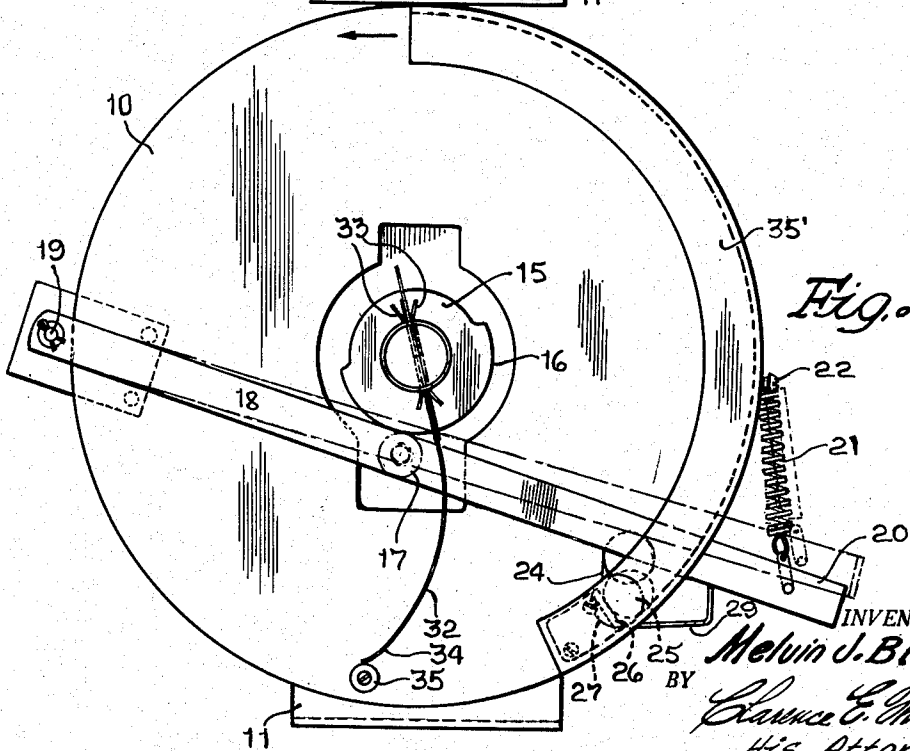


Fig. 2.

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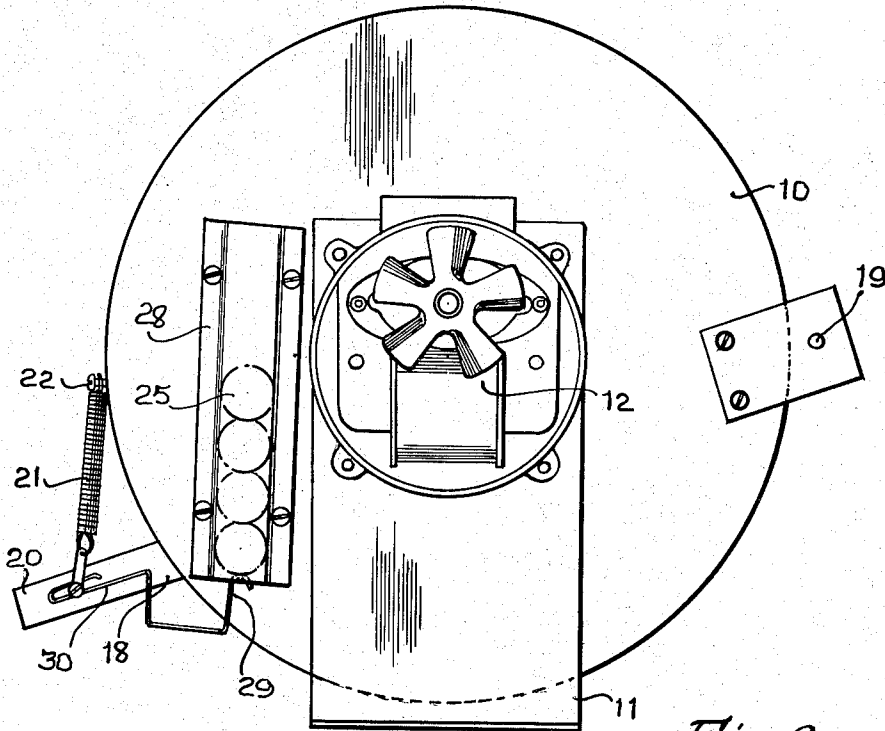


Fig. 3.

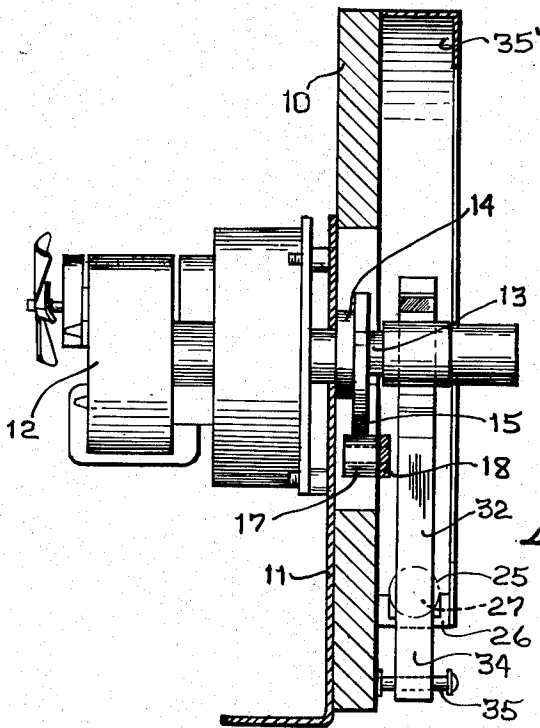


Fig. 4.

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UNITED STATES PATENT OFFICE

2,660,158

PROJECTING DEVICE

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2 Claims. (Cl. 124-7)

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My invention relates to a projecting device for projecting a ball from a ball seat and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

Among the several objects of this invention is to provide a device of this character which is capable of successively projecting balls at a high rapidity thereby to simulate the effect of machine gun operation.

It is another object of this invention to accomplish the foregoing result by a device which is simple in construction, easy of operation, and one which comprises the minimum number of parts.

Another object of the invention is to provide a device of the character to be presently described which may be incorporated in an amusement or target practicing apparatus wherein balls are required to be successively propelled or projected.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a fragmentary side elevational view of my invention;

Fig. 2 is a view similar to Fig. 1 but showing parts thereof in different positions;

Fig. 3 is a side elevational view of the reverse side of Fig. 1; and

Fig. 4 is a sectional detail view taken substantially on line 4-4 of Fig. 1.

It is contemplated that the preferred form of construction for accomplishing the several objects of my invention comprises a mounting panel 10.

Mounted on this panel 10 is a bracket structure 11 carrying a motor 12, preferably of the electrical type although the motor may, if desired, be spring-driven. The shaft 13 of the motor 12 is journaled in a suitable bearing 14. Fixed to this shaft for rotation therewith is a cam 15 having a hill 16 of substantial length. This hill 16 is adapted to have engagement with a roller 17 carried by an arm 18. One end portion of this arm 18 is pivoted as at 19 to the mounting panel 10. The opposite end portion 20 of this arm is connected to a spring 21 in turn connected as at 22 to the panel 10.

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Formed in the panel 10 is a downwardly tapered opening 24 through which a ball 25 is delivered to a ball seat 26 bifurcated so as to permit a portion 27 of the ball to be disposed beneath the seat for engagement with a striker arm hereinafter referred to. The arm 18 normally is positioned to permit a ball to pass through the delivery opening 24 from a feed tube 28 mounted on the panel 10. Projecting into the bottom portion of the feed tube 28 is a blocking finger 29 formed as an integral part of a wire length 30 secured to the arm 18 as shown in Fig. 3. The arrangement is such that when the hill of the cam 16 is disposed from engagement with the roller 17, the spring 21 will pivot the arm 18 upwardly about its pivot connection the panel 10 to dispose the arm from blocking position with respect to the opening 24. In this position the blocking finger 29 is disposed in a position to block passage of balls from the feeding tube 28 to the opening 24. However, when the hill engages the roller 17 the arm 18 will be moved downwardly into blocking position as shown in Fig. 1 to block passage of a ball through the opening 24 to the seat 26. In this position of the arm 18 the blocking finger 29 is moved from ball blocking position to permit the lowermost ball in the tube 28 to gravitate into the opening 24 where it is held until released by the arm 18. The tube 28 may be of any length and may communicate with a suitable hopper (not shown) from which balls gravitate into the tube 28.

The means for projecting the ball from the seat 26 comprises a relatively stiff finger 32 of spring material and substantially elongated. This finger is secured to the shaft 13 in any approved manner as by projecting one end thereof through a slot formed in the shaft and then wedging such projected end in the slot by wedges 33. The width of the striking end or batting end 34 is such as permits the free or batting end portion 34 to pass through the bifurcated ball seat 26.

Spaced from the ball seat 26 and arranged in the path of the batting end 34 of the finger 32 is a laterally extending blocking pin 35. The arrangement is such that, as the cam 15 is rotated by rotation of the shaft 13, the batting end 34 of the finger 32 will engage the blocking pin 35, with the result that as the cam 15 is rotated the finger 32 will be momentarily held against rotation to place the same under tension as shown in Fig. 2. This condition will remain until the striking end 34 rides off the blocking pin 35 at

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which time the finger 32 will violently strike the ball 25 with such force as to drive the ball along the track 35' to a position where it will take the path indicated by the arrow in Figs. 1 and 2.

In target practicing apparatuses or in other amusement game apparatuses where it is desired to project successively balls at a target or other object, it is of importance that the projection of the balls be with substantial rapidity so as not to delay the playing of the apparatus and also to hold the attraction and amusement of the player of the apparatus. By the employment of a construction such as is herein described a projectile device is provided which will accomplish this object.

My improved projectile device may be mounted in a game apparatus in any approved manner such as, for example, upon a swivel support which will permit the device to be adjusted for aiming in various directions.

My projectile device is especially useful for employment in amusement game apparatuses.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A projecting device comprising a mounting panel, a circular runway on said panel, a shaft arranged concentrically with respect to said runway and carried by said panel, means for rotating said shaft, a striker carried by said shaft and rotatable therewith and extending radially therefrom and having an end portion movable through said runway, a stationary ball seat arranged in said runway and adapted to receive and seat a ball in the path of said striker, a fixed blocking pin arranged in said runway in advance position with respect to said ball seat for engagement with the end of said striker to place said striker under tension during rotation of said shaft and to effect striking of said striker against a ball on said seat when said end portion of said striker rides off said blocking member to project said ball from said seat through said runway, said panel having

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a ball opening at one side of and leading to said runway for successively delivering balls to said ball seat, and means pivotally carried by said panel for regulating the movement of balls through said opening, said last named means including an eccentric rotatably carried by said shaft and operable on said means to pivot the same into and out of regulating position with respect to said ball delivery opening.

2. A projecting device comprising a mounting panel, a circular runway on said panel, a shaft arranged concentrically with respect to said runway and carried by said panel, means for rotating said shaft, a striker carried by said shaft and rotatable therewith and extending radially therefrom and having an end portion movable through said runway, a stationary ball seat arranged in said runway, a fixed blocking pin arranged in said runway in advance position with respect to said ball seat for engagement with the end of said striker to place said striker under tension during rotation of said shaft and to effect striking of said striker against a ball on said seat when said end portion of said striker rides off said blocking member to project said ball from said seat through said runway, said panel having a ball opening at one side of and leading to said runway for successively delivering balls to said ball seat, an arm pivotally carried by said panel and movable into ball blocking position with respect to said opening, a blocking finger carried by said arm and movable into ball blocking position with respect to said opening and means for alternately moving said arm and said finger into and from said ball blocking position, said last named means including a camming member rotatably carried by said shaft and engageable with said arm to pivot the same into and from ball blocking position.

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References Cited in the file of this patent
UNITED STATES PATENTS

Number	Name	Date
1,190,565	Long	July 11, 1916
1,777,976	Lacoste	Oct. 7, 1930
1,834,395	Gavlak	Dec. 1, 1931
1,863,035	Stuart	June 14, 1932
2,295,225	Lohr et al.	Sept. 8, 1942
2,566,090	Marcy	Aug. 28, 1951