Sept. 22, 1959 J. ELLMAN 2,905,468

COMBINED TOY GUN AND MOVING TARGET

Filed Nov. 18, 1957 3 Sheets-Sheet 1

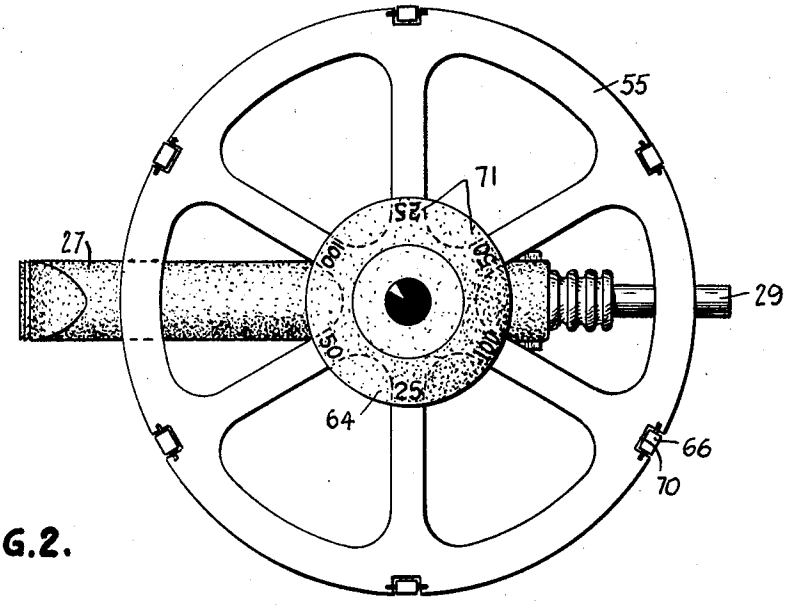


FIG.2.

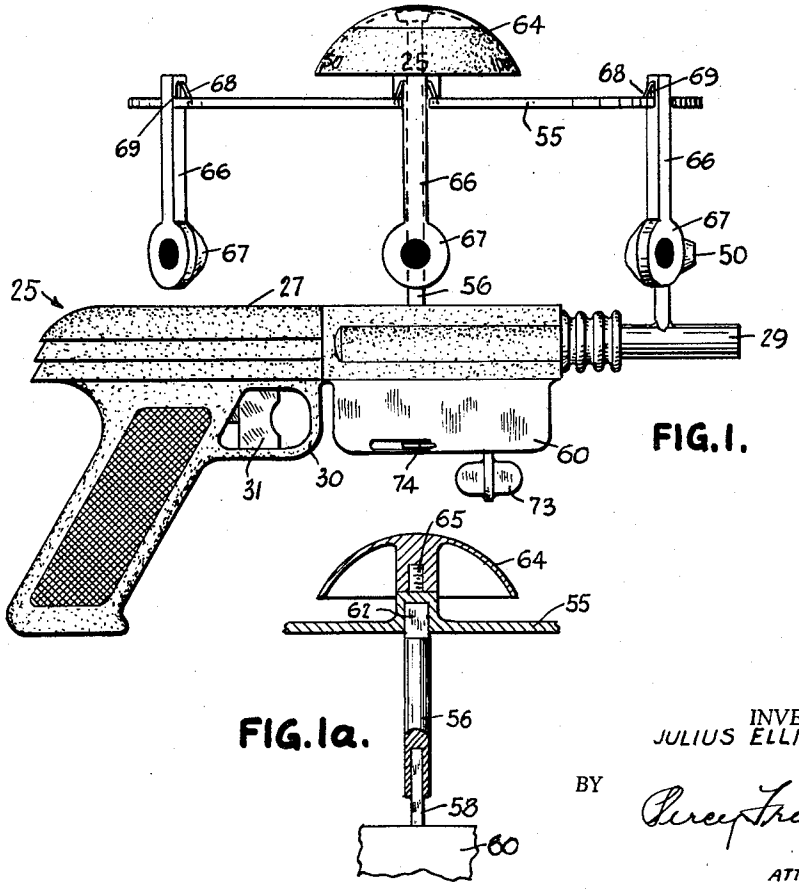


FIG.1.

FIG.1a.

INVENTOR.
JULIUS ELLMAN

BY Percy Freeman

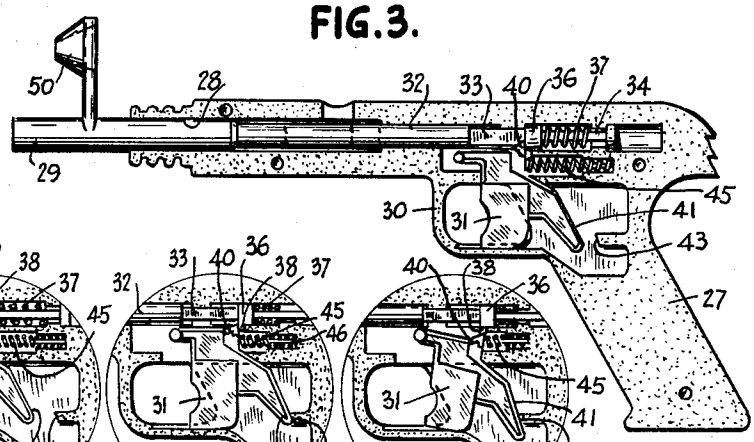
ATTORNEY.

Sept. 22, 1959 J. ELLMAN 2,905,468

COMBINED TOY GUN AND MOVING TARGET

Filed Nov. 18, 1957 3 Sheets-Sheet 2

FIG.3.



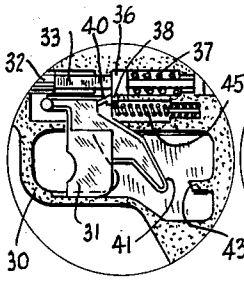


FIG.4.

FIG.5.

FIG.6.

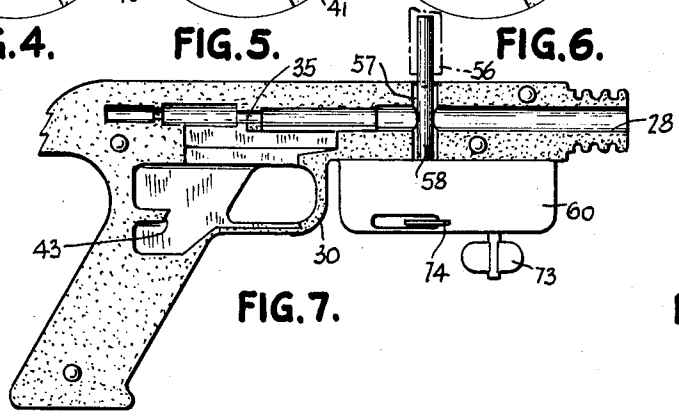


FIG.7.

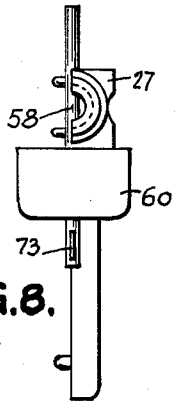


FIG.8.

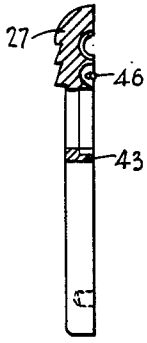


FIG.10.

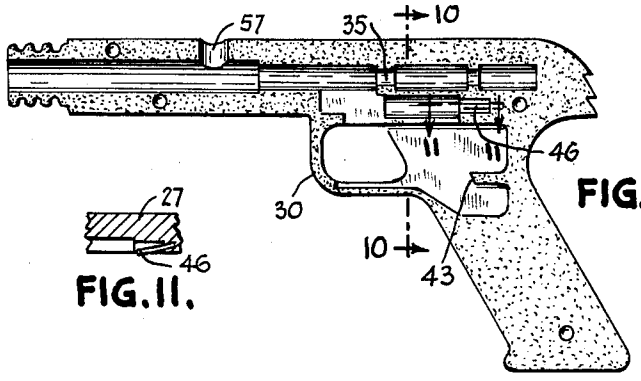


FIG.9

FIG.11.

INVENTOR.
JULIUS ELLMAN.

BY Percy Freeman

ATTORNEY.

Sept. 22, 1959 J. ELLMAN 2,905,468

COMBINED TOY GUN AND MOVING TARGET

Filed Nov. 18, 1957 3 Sheets-Sheet 3

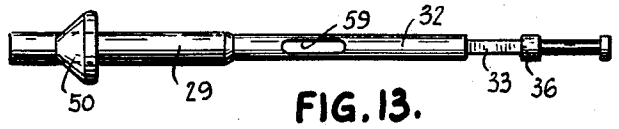


FIG. 13.

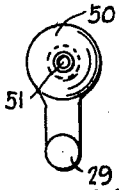


FIG. 14.

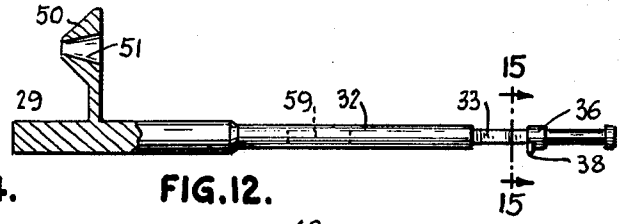


FIG. 12.

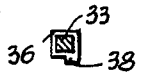


FIG. 15.

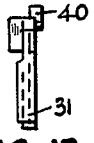


FIG. 17.

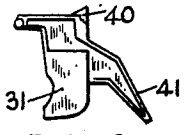


FIG. 16.

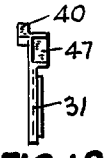


FIG. 18.

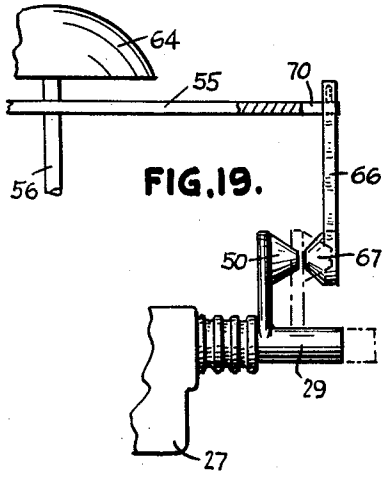


FIG. 19.

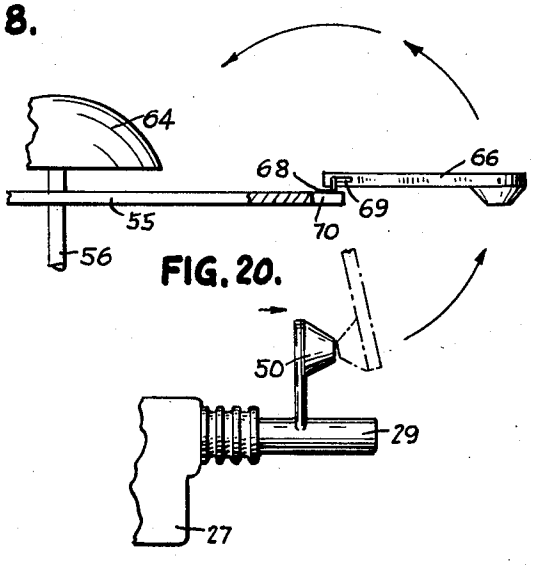


FIG. 20.

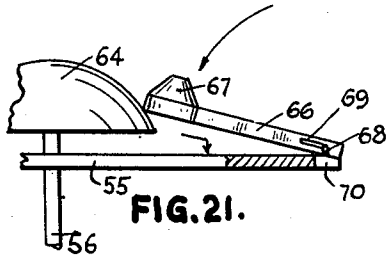


FIG. 21.

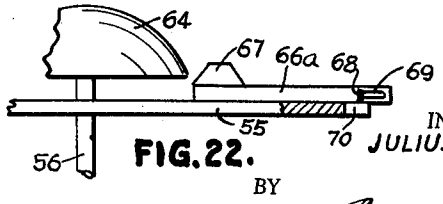


FIG. 22.

INVENTOR.
JULIUS ELLMAN

BY

Julius Ellman

ATTORNEY.

United States Patent Office 2,905,468 Patented Sept. 22, 1959

2,905,468

COMBINED TOY GUN AND MOVING TARGET

Julius Ellman, Brooklyn, N.Y., assignor to said Ellman and George Lerner, Freeport, N.Y.

Application November 18, 1957, Serial No. 697,156

6 Claims. (Cl. 273—101)

This invention relates to amusement devices and, more particularly, to a toy target gun for children and adults alike.

While various types of target toys have been provided, many of those available require the use of a projectile of one type or another which must be impelled toward the target. In some cases, these projectiles can cause injury to the person should they accidentally strike a contestant or bystander. Furthermore, these projectiles often become lost or damaged so as to materially reduce the useful life of the game or interfere with the continued operation thereof. Accordingly, it is an object of the present invention to provide a target toy that is simple in construction, efficient in operation, and which will overcome the aforementioned difficulties.

Another object of the present invention is to provide a target gun having moving targets that are entirely self-contained upon the gun and which can be readily carried about and played both indoors and outdoors.

Still another object of the present invention is to provide a target gun of the type described in which the score is entirely dependent upon the skill of the operator, means being provided to tally the score of each player.

Another object of the present invention is to provide an amusement device that includes a target gun and self-contained target that can be readily assembled for use and taken apart for storage and packaging purposes.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein:

Fig. 1 is a side elevational view of a target gun toy made in accordance with the present invention.

Fig. 1*a* is a fragmentary cross-sectional view of certain parts of the apparatus shown in Fig. 1.

Fig. 2 is a top plan view of the toy shown in Fig. 1.

Fig. 3 is a longitudinal cross-sectional view of the toy shown in Figs. 1 and 2 with the target mechanism removed.

Figs. 4, 5, and 6 are enlarged fragmentary views of certain parts of the apparatus shown in Fig. 3, illustrating successive positions of the trigger and firing mechanism.

Fig. 7 is a longitudinal cross-sectional view of the body of the gun, showing one-half of the completed gun.

Fig. 8 is a front elevational view of the device shown in Fig. 7.

Fig. 9 is a view similar to Fig. 7, showing the opposite side of the gun.

Fig. 10 is a transverse cross-sectional view taken along line 10—10 of Fig. 9.

Fig. 11 is an enlarged fragmentary cross-sectional view taken along line 11—11 of Fig. 9.

Fig. 12 is a side elevational view, with parts broken away, of the striker mechanism forming a part of the present invention.

Fig. 13 is a top plan view of the device shown in Fig. 12.

Fig. 14 is a front elevational view of the striker shown in Fig. 12.

Fig. 15 is a transverse cross-sectional view taken along line 15—15 of Fig. 12.

Fig. 16 is a side elevational view of a trigger forming a part of the present invention.

Fig. 17 is a front elevational view of the trigger shown in Fig. 16.

Fig. 18 is a rear elevational view of the trigger shown in Fig. 16.

Fig. 19 is a fragmentary side elevational view, with parts broken away, of certain parts of the toy shown in Fig. 1.

Fig. 20 is a view similar to Fig. 19, illustrating successive positions of the scoring device.

Fig. 21 is a view similar to Fig. 20, showing a subsequent position of the target mechanism.

Fig. 22 is a view similar to Fig. 21, illustrating the final, at rest, position of the scoring member relative to the remaining portions of the target structure.

Referring now to the drawing, and more particularly to Figs. 1 and 2 thereof, a target toy 25 made in accordance with the present invention is shown to include a gun 27 having a main body portion defining a longitudinal barrel 28 within which a forwardly and outwardly projecting barrel portion 29 is slidably supported for reciprocating longitudinal movement.

With further reference now to Figs. 3 to 18 of the drawing, a trigger mechanism for controlling the operation of the toy is shown to include a finger piece 31 which is displaceably supported within the trigger guard 30. The forwardly projecting barrel portion 29 includes a mid section 32 of slightly reduced diameter and a rearwardly disposed non-circular portion 33 which is slidably received within a similarly shaped bore 35 of the main body portion for preventing rotation of the member 29 about its longitudinal axis. A compression spring 37 encircles the rearmost terminal portion 34 of the member 29 and is seated at its rearward end against the main body portion with the forward end thereof in abutment with an integral boss 36 of the barrel member 29. This spring 37 normally urges the forwardly projecting barrel member 29 in an outward direction for purposes hereinafter described. The trigger finger plate 31 has a rearwardly and upwardly extending projection 40 that is adapted to abut against a downwardly protruding lug 38 of the barrel member 29 during rearward movement of the trigger finger plate. However, as the rearwardly facing cam surface 41 on the trigger plate 31 engages with a fixed follower 43 of the main body portion, the projection 40 is moved out of blocking engagement with the lug 38 to enable the partially compressed spring 37 to thrust the barrel member 29 forwardly. A separate compression spring 45 acting between the main body portion and the upper portions of the trigger finger plate is operative to return this trigger plate 31 to the normal forward position after finger pressure has been removed therefrom. This spring 45 encircles a positioning stud 46 on the main body portion at one end and has the opposite end received within a seat 47 on the plate 31. It will thus be recognized that a squeezing pressure upon the trigger plate 31 is in itself operative to first spring-load and then release the forwardly projecting barrel member 29 so as to function as a repeating target pistol.

The forwardly projecting barrel portion 29, together with an upwardly extending member 50 provides a striker assembly for striking targets as they are moved into proximity therewith, in a manner hereinafter described. This striker member 50 may also be provided with a longitudinal bore 51 to simulate a gun sight. With reference again to Figs. 1, 1*a*, and 2 of the drawing, the target mechanism is shown to include a target wheel 55 that

is removably carried upon the non-circular portion **54** at the upper end of a shaft **56** which is also removably mounted at its lower end upon a non-circular stub shaft **58**. This stub shaft **58** extends through an enlarged bore **57** which extends transversely through the main body portion of the gun into association with a spring operated motor **60** carried beneath the barrel portion thereof. As is more clearly shown in Fig. 13 of the drawing, the stub shaft **58** extends through a longitudinally elongated slot **59** that extends transversely through the reduced central portion **32** of the forwardly projecting barrel member **29**, so as to avoid interference with the reciprocating longitudinal movement of this member and to enable the spring motor **60** to rotate the shaft and target wheel **55** during operation of the trigger mechanism.

An audible signal device, such as a metallic bell **64** is threadingly secured to an upwardly extending terminal stud **65** that is integral with the central portion of the target wheel **55**. A plurality of circumferentially spaced apart recesses **70** are disposed along the periphery of the target wheel **55** for accommodating the upper ends of target arms **66** therewithin. The upper end of each of the arms **66** is also provided with a longitudinally elongated slot **69** which receives the upwardly projecting base of inverted U-shaped bails **68** that are carried by the target wheel **55** and which overlie each of the recesses **70**. The opposite end of each arm **66** is provided with a target member **67** that is adapted to be struck by the striker element **50**. It is to be noted that the particular mounting of each arm **66** upon the upwardly extending bail **68** enables the arm **66** to be rotated into striking engagement with the centrally located bell **64** and to slide radially outwardly throughout the length of the slot **69**, out of contact with the bell **64**, so as to prevent muffling of the bell when the next target object strikes it. Furthermore, the arms **66** will strike the upper surface of the wheel **55** in substantially flat face engagement so as to prevent the arms from bouncing back to the initial position after striking the bell, whereby the scores of each player may be tallied at the end of each player's turn. As is shown in Figs. 1 and 2, the bell or wheel may be provided with scoring indicia **71** so that a greater variety of scores is possible and enables the player to aim at certain higher valued targets.

In actual use, the motor **60** is manually wound by means of a key **73**, while a manually operated stop lever **74** is provided to prevent unwinding of the motor until the device is ready to be played by the contestant. Each player may be allowed to fire a predetermined number of times or may be allowed to continue firing throughout the rotational movement of the target wheel **55**. With all of the arms **66** initially in the free hanging position shown in Fig. 2, each player attempts to hit as many of the targets as possible with the striker element **50** while the wheel is turning, all of the scores being registered by the striking of the bell **64** and by tallying the total score of the indicia **71** at the end of the player's turn.

It will be noted that the target arms **66** are disposed above the uppermost level of the gun portion so that movement thereof is not interfered with, the striker element **50** being at substantially the same level as the target pieces **67** as they are rotated. Because of the aforementioned striker actuating mechanism, the trigger plate **31** can be reciprocated as fast as desired in order to obtain the desired repeater action so as to enable the large quantity of attempts to be made to strike the targets during the period of rotation thereof. When not in use, or when packed for distribution and sale, the wheel **55** and shaft **56** may be dismounted from the gun to save space.

While this invention has been described with particular reference to the construction shown in the drawing, it is to be understood that such is not to be construed as imparting limitations upon the invention, which is best defined by the claims appended hereto.

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

1. A target gun assembly comprising, in combination, a main body portion, a target carrier rotatably carried by said main body portion, a plurality of targets swingably supported on said target carrier, means for continuously rotating said target carrier a striker for hitting said targets carried by said main body portion in proximity with said targets, and manually actuated means independent of the target carrier rotating means, and carried by said main body portion for selectively moving said striker toward said targets.

2. A target gun assembly comprising, in combination, a main body portion, a target carrier rotatably supported upon said main body portion, a plurality of targets swingably supported on said target carrier, means for continuously rotating said target carrier a striker carried by said main body portion for selective movement along a fixed path toward said targets, and manually actuated means independent of the target carrier rotating means, and carried by said main body portion for selectively affecting movement of said striker along said fixed path.

3. A target gun assembly as set forth in claim 2 wherein the means for rotating the target carrier includes a normally vertical shaft rotatably carried by said main body and connected to said carrier for rotating the same in a horizontal plane, said targets each supported on an arm and depending downwardly from said carrier into the path of movement of said striker, there being a lost-motion connection between said target arms and said target carrier.

4. A target gun assembly as set forth in claim 3, wherein said lost-motion connection includes a plurality of outwardly opening peripheral recesses in the target carrier, a bail overlying and bridging each of said recesses and having a bearing portion above the plane of said target carrier for pivotally supporting each one of said arms.

5. A target gun assembly as set forth in claim 4 wherein said lost-motion connection further includes a longitudinally elongated and transversely extending slot at one end of each of said arms for slidably receiving the bearing portion of its respective bail, and the opposite end of each of said arms includes an enlarged portion for striking engagement by said outwardly extending projection of said striker.

6. A target gun assembly as set forth in claim 5, further comprising a bell centrally mounted upon said target carrier, the length of said arms being substantially equal to the radius of said carrier, whereby said enlarged portion strikes said bell in response to rotational movement thereof upon impact of said striker and then moves away from said bail by reason of said slot.

References Cited in the file of this patent

UNITED STATES PATENTS

682,790	Chapman	Sept. 17, 1901
1,154,331	Mitchell	Sept. 21, 1915
1,650,935	Cox	Nov. 29, 1927
2,006,955	Kolar	July 2, 1935
2,352,000	Nogrady	June 20, 1944
2,527,254	Hjelm	Oct. 24, 1950
2,759,294	Tigrett	Aug. 21, 1956
2,770,916	Sigg	Nov. 20, 1956