

Sept. 12, 1933.

J. W. GIBBONS

1,926,585

GUN AND TARGET

Filed July 3, 1931

2 Sheets-Sheet 1

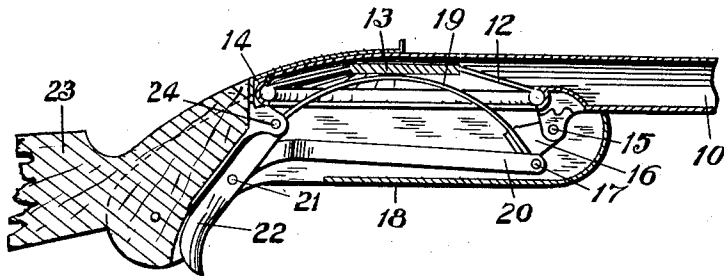
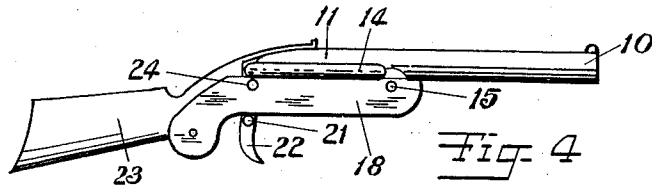


Fig. 3

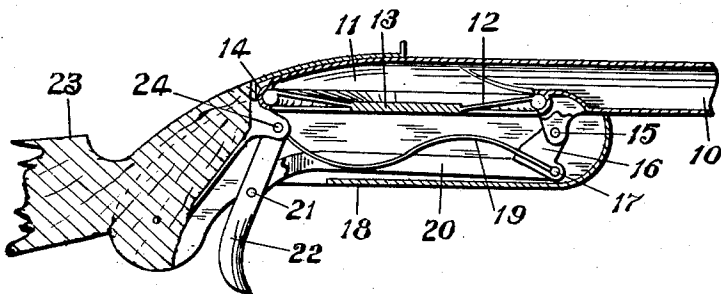


Fig. 2

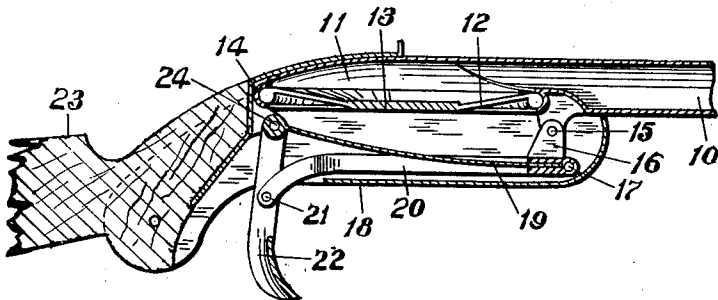


Fig. 1

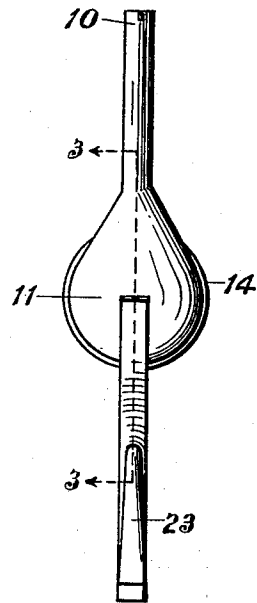


Fig. 5

INVENTOR

John Wood Gibbons

Sept. 12, 1933.

J. W. GIBBONS

1,926,585

GUN AND TARGET

Filed July 3, 1931

2 Sheets-Sheet 2.

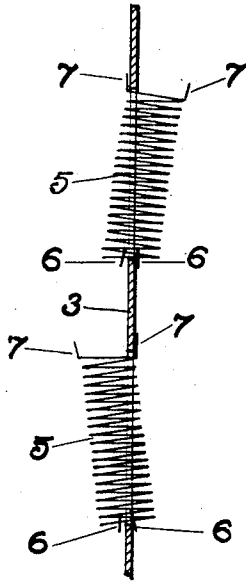


Fig-8

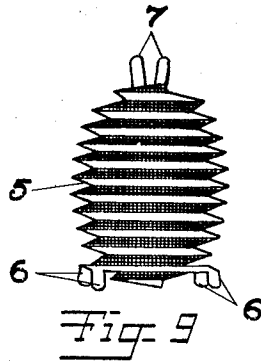


Fig-9

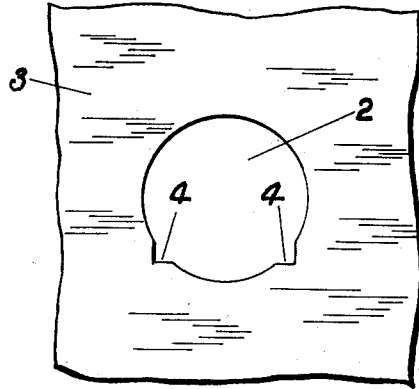


Fig-10

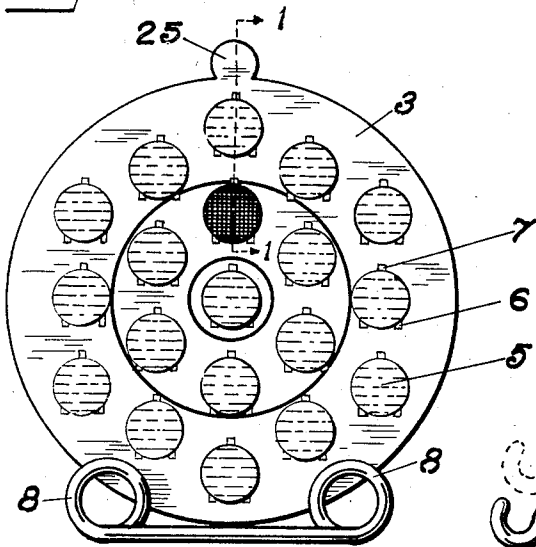


Fig-6

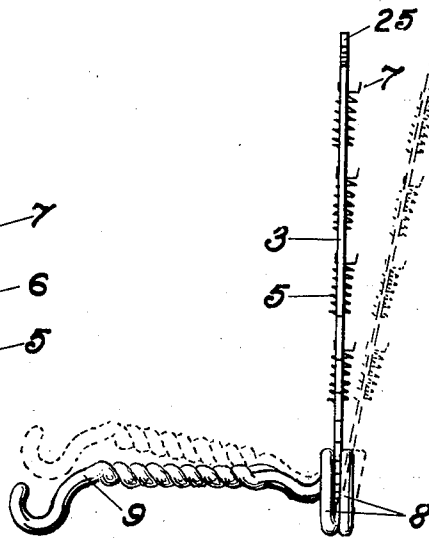


Fig-7

INVENTOR

John W. Gibbons.

UNITED STATES PATENT OFFICE

1,926,585

GUN AND TARGET

John Wood Gibbons, Boise, Idaho

Application July 3, 1931. Serial No. 548,565

4 Claims. (Cl. 124—8)

This invention relates to a gun and target, and more particularly to that class of devices adapted to project a puff of air across an intervening space accompanied by a sharp cracking sound, and operates a target revealing a black spot on the white face thereof.

The primary object of the invention resides in the construction and provision of a gun and target that requires no ammunition and provides a safe indoor game.

Another important object of the invention is a target that makes possible the proper effect of a gun that projects a puff of air, and provision of a gun that makes the toy perfectly harmless in its operation, instantaneous and mysterious in its action, and pleasing in its effect as a toy, the device is simple in construction and capable of being manufactured at a low cost.

These and further objects together with the construction and combination of parts will be more fully described hereinafter, and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar characters of reference indicates corresponding parts in all the views, and in which Fig. 1 is a side elevation of the gun in cross section taken on a line 3—3 Fig. 5, showing the working parts of the gun in their normal position. Fig. 2 is another side elevation in part cross section with the parts moved progressively in the act of firing the gun. Fig. 3 is still another similar view with the working parts moved progressively and are in a position when the gun has been fired. Fig. 4 is a contracted side elevation of the entire gun, and Fig. 5 is a contracted plan of the entire gun; Fig. 6 is a contracted front elevation of the target; Fig. 7 is a contracted side elevation of the target; Fig. 8 is a side elevation in cross section on a line 1—1 Fig. 6; Fig. 9 is a vertical prospective view of a shutter, and Fig. 10 is a broken front elevation showing one perforation in a target disc.

Referring more particularly to the separate parts; 2 is one of a plurality of perforations through a target disc 3, of any desirable shape. In the drawings I show a round perforation and there is provided 2 notches 4, the purpose of which will be fully described hereinafter. 5 is a shutter made of any suitable material, such as light thin metal, and is formed or folded and is adapted to close or shut the perforations 2, in the target disc with alternated parallel ridges, the front surfaces of which are variegated with alternate contrasting colors, the lighter color

preferably white on the upper surfaces, and the darker color, preferably black on the under surface as is plainly shown in Fig. 9. The shutter is provided with two crotches adjacent its lower edge formed at each end of one of its ridges in any well known manner, such as bending down ears 6. It should be easily seen in Fig. 8, that the shutter 5, is capable of rocking or tilting freely backward or forward across the plane of the target disc, crotched over the horizontal edges of the notches 4; the shutters are also provided with stop lugs 7, on their upper ridge, and are adapted to limit the angle of inclination either backward or forward; 8, are double wire loops adapted to grip the periphery of the target disc adjacent its lower edge, and are joined across the bottom providing a suitable support and rocking surface; 9 is a leg extending backward of the target disc and provides a prop that holds the target disc in vertical normal position; 25, is a projection at the top of the target disc providing a finger hold when tipping the target and its support forward from its vertical position, such a forward tipped position is shown in dotted line Fig. 7; 19, is a flat spring one end of which swings freely around a shaft 24, the other end is securely fastened in any well known manner within the folds of a stirrup 16, below a pivotal point 15, around which the stirrup swings freely; 22, is a trigger lever forked at its upper extremity, and is adapted to swing freely around a shaft 24, co-axial with the spring 19, intermediate its upper and lower ends is pivotally connected on a pin 21, a bifurcated link 20, the bifurcated end of which is adapted to engage pivotally on both sides of the stirrup 16, on a pin shaft 17, the whole held firmly together by a casing 18; a sound disc 13 of any suitable material, such as metal, preferably integral to a diaphragm 12, said diaphragm of any suitable material such as rubber adapted to be flexible, molded or formed in any well known manner to seek its normal shape as shown in Figs. 1 and 2, the periphery of the diaphragm is preferably formed in the shape of a cord or ring and is adapted to expand snugly against the internal diameter of a circular groove 14, formed on the lower edge of the walls of a diaphragm cell 11, said cell constituting the breach end of a gun barrel 10.

Having disclosed the particular arrangements of some of the elements of the gun and target, I now come to their operation:

The target is placed level on a suitable stand or table, and tipped forward in a position shown

in dotted line Fig. 7, in this position all of the shutters are tilted forward, now the target disc is allowed to go back to a vertical position, and is provided with a propping member 9, adapted
 5 to support the target in normal vertical position. In the forward tilted position of the shutters, as stated above the upper surfaces of the ridges are exposed to the vision of the players and the face of the target appears white, ready to
 10 be operated. Now the gun is held in the customary fashion i. e. supported under the arm-pit by the stock 23, aim is taken at the target and the player pulls the trigger lever 22, the effect of such a pull is shown in Fig. 2; by
 15 the constricted condition of the spring 19, due to the ever shortening distance between the movable point 17, and the fixed point 24, and the upward tip of the nose of stirrup 16; this combination of movements as described forces spring
 20 19, into the form of a reverse curve, and it should be easily seen at this stage of the operation as shown in Fig. 2, that the forces applied to the trigger lever reside latent in the spring; now by pulling the trigger lever still further in the
 25 direction of the gun stock 23, the nose of the stirrup 16, points still higher, and the spring breaks across the constricted line between its two ends, and slaps with great effect upon a sound disc 13, emitting a sharp cracking sound, this last position of the working parts is shown
 30 very clearly in Fig. 3; the player now releases the pull on the trigger lever and all the working parts adjust themselves automatically to a normal position as shown in Fig. 1. Reference
 35 is to be had again to Fig. 3, showing the depression of the diaphragm 12, due to the slap of the spring 19, and the consequent displacement of the air in cell 11, a like quantity of
 40 air is projected from the end of the gun barrel 10, at a high velocity, due to the contracted relation of the gun barrel to the cell. Now if the player's aim is sufficiently accurate and the puff of air projected by the gun strikes the
 45 face of the target disc, one of the shutters will be tilted to its backward position, such a position is shown at the lower shutter in Fig. 8, and in this position this particular shutter indicates the
 50 existence, and also the location on the face

of the target disc that the puff of air has struck, by exposing to the vision of the players the lower surfaces of the ridges forming the shutters, and this particular shutter appears black as is
 55 shown in Fig. 1; it has been discovered by experiments that the said shutters constructed of ridges as described is more responsive to the action of the puff of air projected by the gun than other forms. The process can be repeated
 60 as often as desired, with the proper score kept for each player's shots.

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

1. The combination, in a gun of the class described, with a cell, a flexible diaphragm, an
 65 internal groove formed around an edge of said cell, a ring constituting the periphery of said flexible diaphragm, and adapted to expand within said groove.

2. The combination in a gun of the class described, with a diaphragm cell having a contracted outlet adjacent its upper wall, said outlet
 70 freely communicating to a gun barrel, a flexible diaphragm forming a lower wall to said cell, provided with a sounding disc centrally located and integral to said diaphragm, a spring in proximity to said sounding disc, and means to snap
 75 said spring against the lower surface of said sounding disc, to project a puff of air from the muzzle of said gun barrel.

3. The combination, in a gun of the class described, with an actuative trigger lever, swinging from a pivotal point, operatively linked to
 80 a swinging stirrup in approximate parallel relations thereto; a flexible spring diagonally connected to said parallel swinging members, means therein to constrict said spring.

4. The combination, in a gun of the class described, with an actuative trigger lever, swinging from a pivotal point, operatively linked to a
 85 swinging stirrup in approximate parallel relations thereto; a flexible spring diagonally connected to said parallel swinging members, means for snapping said spring in striking action, and automatic means inherent in the spring and its
 90 connected relations, for adjusting said trigger lever, and connected members to normal position.

JOHN WOOD GIBBONS.

50

55

60

65

70

75

25

130

135

140

145

150