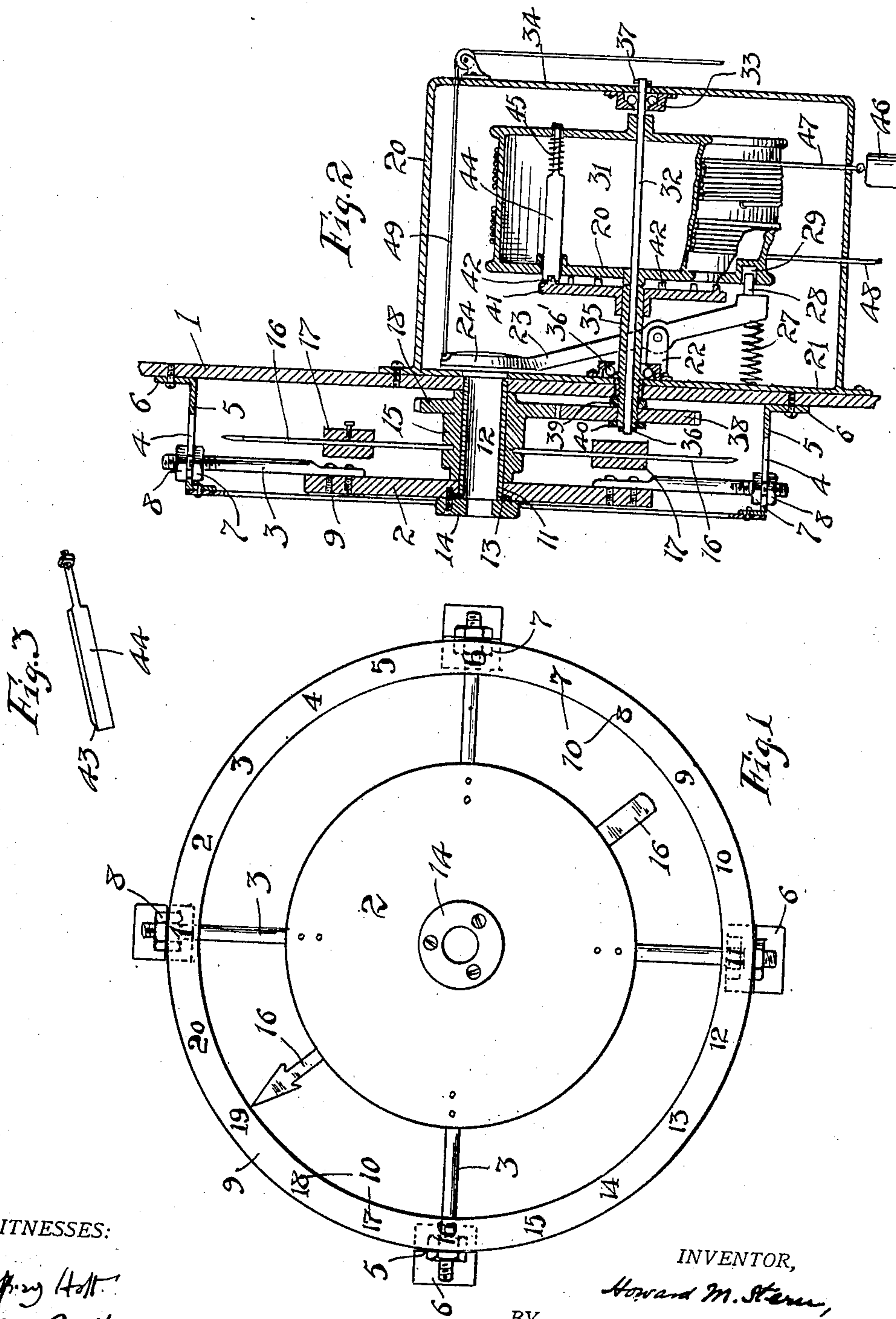


913,317.

H. M. STERN.  
TARGET.  
APPLICATION FILED AUG. 28, 1908.

Patented Feb. 23, 1909.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HOWARD M. STERN, OF OAKLAND, CALIFORNIA.

## TARGET.

No. 913,317.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed August 28, 1908. Serial No. 450,634.

*To all whom it may concern:*

Be it known that I, HOWARD M. STERN, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Targets, of which the following is a specification.

The object of the present invention is to provide a target for shooting which will indicate accurate shots, and will also furnish interest and amusement by registering scores therefor.

In the accompanying drawing, Figure 1 is a vertical front view of my improved target; Fig. 2 is a vertical section thereof; Fig. 3 is a perspective view of the latch.

Referring to the drawing, 1 indicates a wall to which the target is attached. The mechanism of said target consists essentially of two parts, a front part and a back part, which parts have no connection with each other except through the intermeshing of certain gearing. The front part comprises a circular disk, plate or target proper 2, which is attached to the wall by means of four arms 3, extending radially from the disk at right angles to one another, flattened at their inner ends and screwed to the rear wall of the disk, their outer ends being rounded and threaded, and passed through slots 4 in the horizontal members 5 of angle pieces 6, the other members of which are secured to the wall. Upon said threaded ends are screwed inner and outer nuts 7, 8. By this construction, each arm can be adjusted either longitudinally of itself, or nearer or farther from the wall, so that the whole target can be correspondingly adjusted. Upon the angle pieces 6 is secured a ring 9 having a series of numerals 10.

The disk 2 is formed with a central aperture 11 of sufficient size to permit a missile to pass therethrough, and within said aperture is secured a tube 12 having a flange 13 extending over the disk around the edge of the aperture, and on said disk is secured, over said flange, a ring 14. If desired to change the size of the hole constituting the bull's eye, the ring 14 is removed and one with a hole of different size is substituted. Upon the tube 12 rotates a hub 15 having extending therefrom arrow sections 16, upon which are adjustably secured weights 17, hidden by the disk 2, and to said hub is secured a gear wheel 18, which rotates with the hub upon the tube, the rotation of said hub and

gear wheel being effected by the mechanism in the rear part of the apparatus, which will now be described. Said mechanism is principally contained within a frame 20 having a front wall 21 which is secured to the rear side of the wall 1, and upon said plate is formed a post 22 upon which is pivoted a trip lever 23 having a part 24 which is in line with the bull's eye aperture and with the tube 12. The wall 1 and the front wall 21 of the rear frame are also formed with corresponding apertures, so that a missile passing through the bull's eye aperture will impinge upon the striking part 24 of said trip lever. The trip lever is furnished with a spring which normally holds said striking part close to said hole in the plate, and thereby holds a trip finger 28 formed on the other end of the lever in a recess 29 formed in the front plate of a drum 31, which rotates loosely upon a shaft 32. Said shaft 32 can also turn in its bearings, its rear bearings being ball bearings 33 secured to the rear wall 34 of the frame 20. The front end of the shaft rotates within a sleeve 35 which itself rotates, having ball bearings 36' secured to the front wall 25 of the frame. Pins 36, 37, are driven through the ends of the shaft to retain it in position. The front end of the sleeve is threaded externally, and thereon is screwed a gear wheel 38, which meshes with the gear wheel 18, inner and outer nuts 39, 40, being also screwed on the sleeve so as to retain said gear wheel 38 in any position to which it has been adjusted.

The rear end of the sleeve 35 has mounted thereon a disk 41, which carries on its rear face a suitable number, of pins 42, each of which in turn can engage the beveled end of a latch 44, which can slide in the drum in a direction parallel to its axis, and is normally projected by a coiled spring 45, around a reduced portion of said latch. Said drum, when free to move, is rotated by means of a weight 46 attached to a cord 47 wound around the drum. A second cord 48 is attached to the drum and wound around it in the opposite direction for the purpose of winding up the weight to energize the drum. This can be done by first removing the trip finger from the drum, and for this purpose a cord 49 is attached to the striking end of the trip lever and passes through the rear wall 34 of the frame, so that, by pulling upon said cord, said trip finger can be removed from engagement with the drum.



The apparatus is used in the following manner. When a missile passes through the bull's eye aperture, it strikes the trip lever, which withdraws the trip finger from the drum, which is then free to rotate, which it does on account of the weight. In its rotation, by reason of the flat side of the latch engaging one or the other of the pins 42 upon the disk 41 said drum also rotates the disk 41, the sleeve 35 and the gear wheel 38, thereby also rotating the gear wheel 18 and the hub 15, and imparting rotation to the arrow. While the drum is rotating, the trip finger returns under the action of the spring and presses against the front plate of the drum until the finger again arrives at the recess 29 in the drum when it drops into said recess and stops the drum. The disk, sleeve, and gear wheels continue to rotate by their momentum, each of the pins in turn impinging against the beveled side of the latch, until the resistance thus occasioned causes these moving parts to stop. The number 10 indicated by the arrow is then added to the score, and a prize is awarded when a certain score has been reached.

I claim:—

1. In an apparatus of the character described, the combination of a rotatable indicator, a rotary element, means for normally rotating said element when released, a de-

vice having a part exposed to the impact of a missile and a part adapted to normally arrest said rotary element, an operative connection between said element and indicator, comprising a rotary disk having pins, and a movable latch arranged to cause said disk to rotate with said element, but permitting said disk to rotate independently of the element, substantially as described.

2. In an apparatus of the character described, the combination of a rotatable indicator, a rotary element, means for normally rotating said element when released, a device having a part exposed to the impact of a missile and a part adapted to normally arrest said rotary element, an operative connection between said element and indicator, comprising a rotary disk having a circular series of pins, and a spring actuated latch arranged to engage each of said pins in succession and having a beveled surface to permit the pins to rotate independently of said element, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HOWARD M. STERN.

Witnesses:

F. M. WRIGHT,  
D. B. RICHARDS.