A. MAURER.

TARGET.

APPLICATION FILED AUG. 21, 1916.

1,210,512.

Patented Jan. 2, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

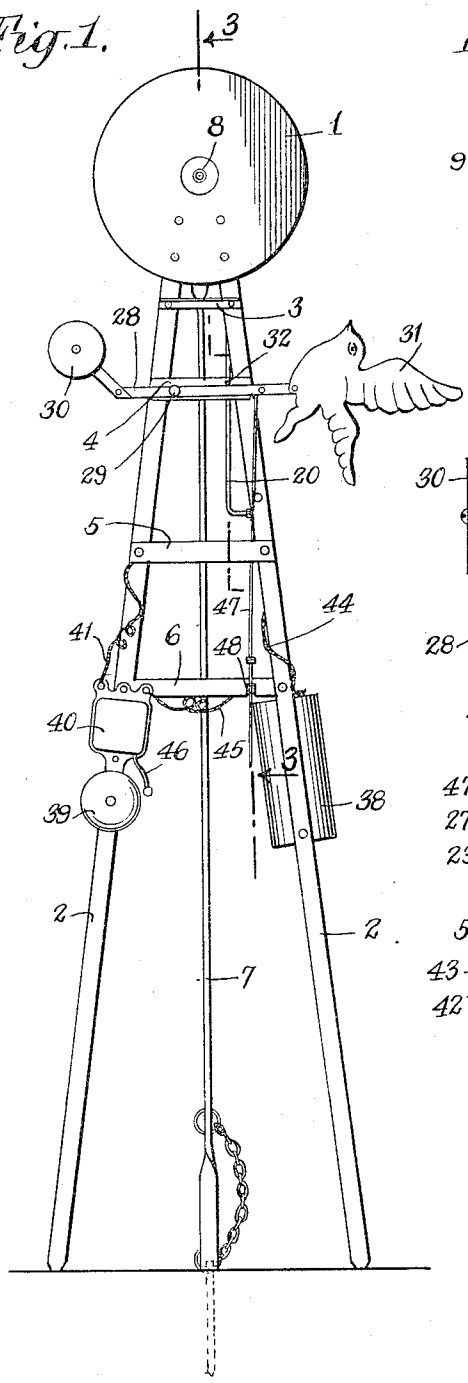


Fig. 3.

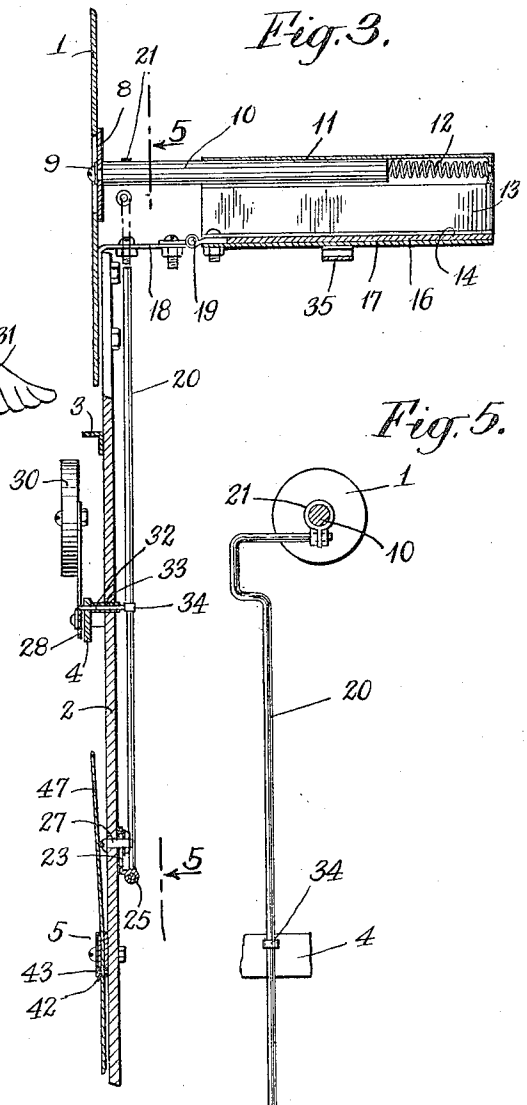


Fig. 5.

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2 SHEETS—SHEET 2.

Fig. 2

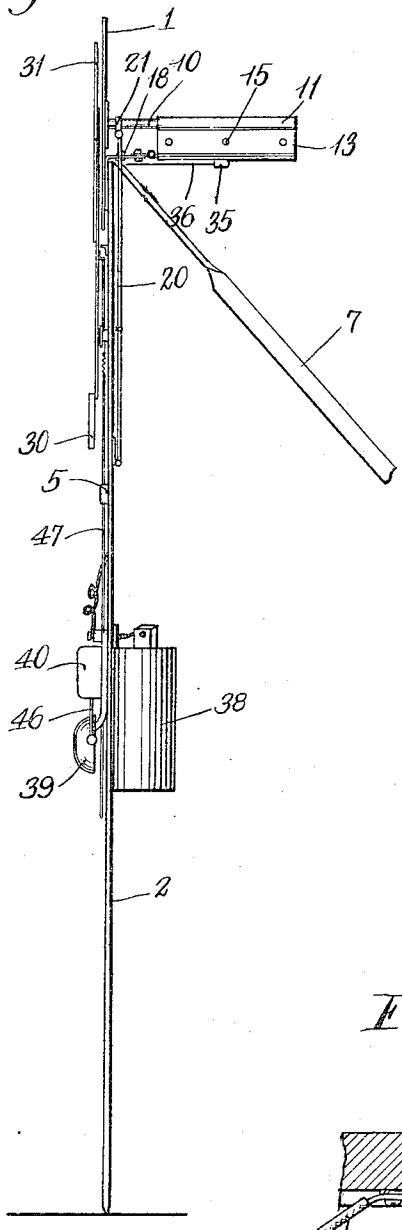


Fig. 4

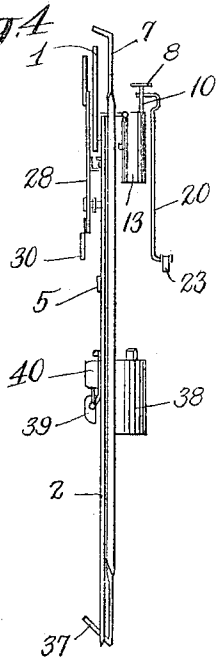
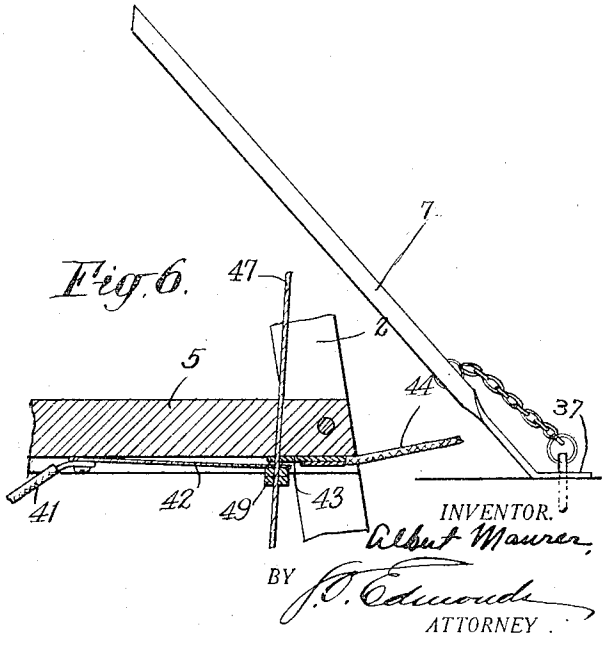


Fig. 6.



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UNITED STATES PATENT OFFICE.

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1,210,512. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed August 21, 1916. Serial No. 115,945.

To all whom it may concern:

Be it known that I, ALBERT MAURER, a citizen of the United States, residence and post-office address 2460 Amsterdam avenue, New York, N. Y., have invented certain new and useful Improvements in Targets, of which the following is a specification.

My invention relates to an improved target especially adapted for use as a toy target, that is for use in connection with an air rifle or other arm projecting bullets with low velocity, although its usefulness is not restricted to this type.

My improved target comprises a bull's-eye plate or member which is driven rearwardly a slight distance by the impact of projectiles thereon, such rearward movement serving to release a depressed signal-carrying arm from a detent to enable the signal to be displayed; the raising of the signal also causes the actuation of the bell or other audible signal. Preferably the raising of the signal-arm causes the closing of a contact in an electrical circuit which continuously operates the bell or alarm until the connection has been broken. The breaking of the connection and the resetting of the parts may be accomplished from the position of the user of the target by the pulling of a cord which may be extended along the ground from the target to him.

The object of my invention is to provide a device of this character having various improved features of construction as will hereinafter be more fully set forth. Among these constructional features may be mentioned the mounting of the bull's eye plate and connections in such manner that the same may readily be swung into a compact position so that the device will take up but little space for packing and transportation.

In order that a clearer understanding of my invention may be had, attention is hereby directed to the accompanying drawings forming part of this application illustrating the preferred embodiment of my invention.

In the drawings Figure 1 represents a front elevation of the device, Fig. 2 represents a side elevation of the same, Fig. 3 is a vertical section taken on the line 3—3 of Fig. 1, Fig. 4 is a side elevation of the same on a smaller scale showing the parts in their inoperative position ready for packing, Fig. 5 is a rear elevation of the bull's-eye plate and pivoted arm connected thereto shown on the line 5—5 of Fig. 3 and Fig. 6 is an enlarged detail sectional view showing the spring and contact for actuating the bell or alarm.

Referring to the drawings, the target 1, a plate of circular form, is secured on the upper end of the support consisting of the legs 2, 2, which are joined together by cross-pieces 3, 4, 5 and 6. The leg 7 is also detachably secured to the device as will hereinafter be described, and is adapted to extend rearwardly at an angle to form a three legged tripod.

The target 1 is provided with a central circular opening above the top of the legs 2, in which opening the bull's-eye plate 8 is adapted to extend. Plate 8 is secured by screw 9 on the end of a plunger 10, which is slidably mounted in a cylinder 11 having a spiral spring 12 mounted in the outer end thereof, to resist rearward movement of the plunger and bull's-eye plate and to normally hold the bull's-eye plate in its position in the opening in the target. Cylinder 11 is preferably formed integral with a supporting member 13, the construction preferably comprising a single sheet of metal bent to shape with a pair of outwardly extending flanges 14 at the lower edges, the metal being bent upwardly from one flange 14 to form a vertical web-portion 13, thence cylindrically to form the cylinder 11, thence vertically downward to form a web-portion parallel to the member 13 shown, and thence outwardly to form the other flange corresponding to the flange 14 shown; the two web-portions 13 lying against each other and being secured together by rivets 15 as shown in Fig. 2. The flanges 14 are secured upon the plate 16 of somewhat less length than the flanges 14, plate 16 resting upon a bottom plate 17, equal in length to the flanges 14.

Cylinder 11 and its supporting member are mounted upon a bracket 18 which extends rearwardly below the opening in the bracket for the bull's-eye plate, this bracket having a vertical arm which is preferably secured in position between the upper ends of legs 2 and the lower portion of target 1, as shown. Member 13 is preferably connected to bracket 18 by a hinge construction, as shown, so that it may be swung into vertical position to make a more compact structure to facilitate packing. As shown, this may be accomplished by means of the hinge-member 19 having one leaf secured to the bracket 18 and the other leaf secured be-

tween the flanges 14 and the bottom plate 17 of the cylinder-supporting member.

An arm or rod 20 is secured at its upper end to plunger 10, slightly to the rear of the bull's-eye plate, by means of a yoke 21. Rod 20 is provided with an offset portion adjacent to its upper end to enable it to pass around bracket 18 and at its lower end it is pivoted to one of the supporting legs 2. Preferably the pivotal connection of rod 20 with leg 2 is made readily detachable to enable member 13 to be swung into its vertical position for packing and transportation. Accordingly, the lower end of rod 20 is preferably provided with an off-set portion 22 upon which is pivotally mounted a short strap 23 having a sleeve portion 24 encircling the horizontal arm 22 of rod 20, the horizontal portion 22 preferably being threaded and provided with a pair of nuts 25, 25 between which the sleeve 24 is loosely mounted. Strap 23 is provided with a slot 26 though the screw 27 may be extended to secure the strap 23 to leg 2. Rod 20 is therefore pivotally movable about sleeve 24 to enable the same to swing forward and back as plunger 10 moves forward and back.

The signal arm 28 is pivoted at 29 to the cross-bar 4 and is provided at one end with a counterweight 30 and at the other with a sgnal device 31, which may be a representation of a bird, flag or the like. This signal device is normally held in depressed position with arm 28 horizontal by means of the detent pin 32, which is mounted on rod 20 and slidably extends through a bearing tube 33 in cross-bar 4. The forward end of pin 32 extends normally through cross-bar 4 above signal arm 28, on the opposite side of pivot 29 from the counterweight 30, to hold signal 31 depressed. Spring 12 in cylinder 1 normally holds this detent pin forward in operative position but a rearward movement of plunger 10 when the bull's-eye is hit causes the withdrawal of pin 32, to permit signal device 31 to rise into position in front of the bull's-eye. The forward end of pin 32 is beveled on its upper surface to permit the signal arm to wipe over the same when it is lowered into normal position on being reset. Preferably pin 32 is slidably mounted on rod 20, by forming the pin with an eyelet or yoke-portion 34 through which rod 20 extends, so that when the device is put in condition for shipping pin 32 will slide down on horizontal portion 22 and hang vertically, out of the way.

Member 13 and cylinder 11 are held in their normal horizontal positions with bull's-eye plate 8 in its operative position, by means of inclined leg 7 of the support. For this purpose the bottom-plate 17 of the plunger supporting arm is provided with a horizontal strap 35 through which may be slid the bent upper end 36 of leg 7, leg 7 having a bent foot-portion 37 adapted to rest on the ground. Leg 7 being of proper length, it is obvious that this engagement of portion 36 of the leg, through strap 35, with plate 17 and bracket 18, holds member 13 in horizontal position with flanges 14 and plates 16 and 17 in alinement with rearwardly extending bracket 18. Screws may also be passed through members 36 and 18 to hold the parts firmly together.

The preferred means for ringing the bell when the bull's-eye is hit, will now be described.

A dry cell or other source of electrical current 38 is secured to one of the legs 2 and a bell 39, together with a device for sounding the bell 40, are secured on the other leg 2. An electrical connection 41 extends from one terminal of the ringing device 40 into the interior of cross-bar 5 wherein is provided a normally open spring-contact maker comprising the spring-arm 42 and the fixed contact 43, with which is connected the conductor 44. This latter is connected to one terminal of battery 38, the other terminal of the battery being connected by a wire 45 to the other terminal of the ringing device 40. Device 40 contains suitable apparatus for causing the hammer 46 to strike continuously on bell 39 during the time that the circuit is completed by the engagement of contacts 42 and 43.

A flexible cord 47 is secured at its upper end to signal arm 28 and passes downwardly through an opening in cross-bar 5 and thence around a pulley 48 on cross-bar 6. The cord 47 may extend along the ground from pulley 48 to the position of the marksman. A small disk 49 is secured on cord 47 below cross-arm 5 and is so arranged as to come into contact with spring-arm 42 to press the same into contact with terminal 43 when signal 31 rises into its upper position, this mechanism being shown in Fig. 6.

It is thought that the operation will now be fully apparent. When the bull's-eye is struck, arm 20 moves rearwardly, immediately withdrawing pin 32 from above signal arm 28, permitting signal 31 to rise and causing disk 49 to close the circuit of bell-actuator 40, thereby causing the bell to sound continuously until the device is reset. The device may be reset by the marksman, without leaving his position, by simply drawing cord 47 toward him until signal arm 28 is again latched beneath pin 32. The position taken by the parts when mounted for packing and transportation is shown in Fig. 4, the leg 7 being shown as secured to the rear of the device and the plunger-carrying member 13 being shown as hanging vertically from its hinge connection with bracket 18, with the rod 20 disconnected from its pivotal connection with leg 2 and hanging vertically from the plunger 10.

Having described my invention, what I claim as new therein and desire to secure by Letters Patent of the United States is:

1. In a target, the combination of a support, a target thereon having an opening therein, a bull's-eye plate in alinement with the opening, a plunger to which said plate is secured, a bracket secured to said support, a cylinder carried thereby, in which said plunger extends, resilient means therein adapted to press said plate forward into the opening, an arm secured to said plunger at one end and pivoted to said support at the other, an arm pivoted to the front of said support, having a counterweight at one end and a signal device at the other, and a horizontal detent slidably mounted in said support, secured to said first named arm, and adapted to extend into coöperative relation to said signal arm to normally hold the same in depressed position, said detent being releasable by rearward impact on said bull's-eye plate, substantially as set forth.

2. In a target, the combination of a support, a target thereon having an opening therein, a bull's-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a rearwardly extending bracket secured to the upper portion of said support, a member carrying a cylinder, hinged to said bracket, and adapted to extend rearwardly or hang vertically therefrom, said plunger extending into said cylinder, said cylinder being arranged to resiliently resist rearward movement of said plunger therein, and means for securing said member in its upper, rearwardly extending position, with said bull's-eye plate alined with said opening, substantially as set forth.

3. In a target, the combination of a pair of supporting legs, a target thereon having an opening therein, a bull's-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a rearwardly extending bracket secured to the upper ends of said legs, a member carrying a cylinder and having a horizontal base portion, hinged to said bracket and adapted to extend rearwardly or hang vertically therefrom, said plunger extending into said cylinder, said base portion having a strap thereon, and a third supporting leg adapted to extend to the rear, and having a bent upper portion removably inserted through said strap, when mounted in position, to hold said member and cylinder in its upper, rearwardly-extending position, substantially as set forth.

4. In a target, the combination of a support, a target thereon having an opening therein, a bull'e-eye plate adapted to be alined with said opening, a plunger to which said plate is secured, a member hinged to said support, and having guiding means in which said plunger is carried, said member being adapted to extend rearwardly in operative, or hang vertically, in inoperative position, an arm secured to said plunger at its upper end and having an offset portion at its lower end, a strap pivotally mounted on said off-set portion, means for removably securing said strap to said support, a detent pin mounted on said arm, a bearing in the support for said pin, when said member is in its operative position, and a signal arm held in depressed position by said detent pin, and released thereby when said plunger and pin are moved rearwardly, substantially as set forth.

5. In a target, the combination of a pair of supporting legs, having upper and lower cross bars, a target above the same having an opening therein, a bull's-eye plate mounted in alinement with said opening, a horizontally-movable member carrying said plate, a vertical rod connected to said member and pivoted to one of said legs, a bearing tube in one of said cross bars, a detent pin on said rod extending through said tube, a counterweighted signal arm pivoted on said cross bar and normally held in depressed position by said detent pin, and means for sounding a signal when said arm is released, substantially as set forth.

6. In a target, the combination of a pair of supporting legs, having upper and lower cross bars, a target above the same having an opening therein, a bull's-eye plate mounted in alinement with said opening, a horizontally-movable member carrying said plate, a vertical rod connected to said member and pivoted to one of said legs, a bearing in one of said cross bars, a slidable detent pin on said rod extending through said bearing, a signal arm pivoted on said cross bar and normally held in depressed position by said pin, an electrically-operated bell-sounding device and battery mounted on said legs, connections between the same, including a normally open pair of contacts mounted in another one of said cross bars, and means for closing said contacts when said signal arm rises, comprising a cord secured to said signal arm and passing through said last-named cross bar, said cord having an enlargement thereon adapted to press said contacts together when said signal arm rises, substantially as set forth.

This specification signed and witnessed this 18 day of August, 1916.

ALBERT MAURER.

Witnesses:
DYER SMITH,
WILLIAM HIMMELREICH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."