(No Model.) 2 Sheets—Sheet 1.

C. SCHIFFERDECKER.

TARGET AND INDICATOR.

No. 521,049. Patented June 5, 1894.

Fig. 1.

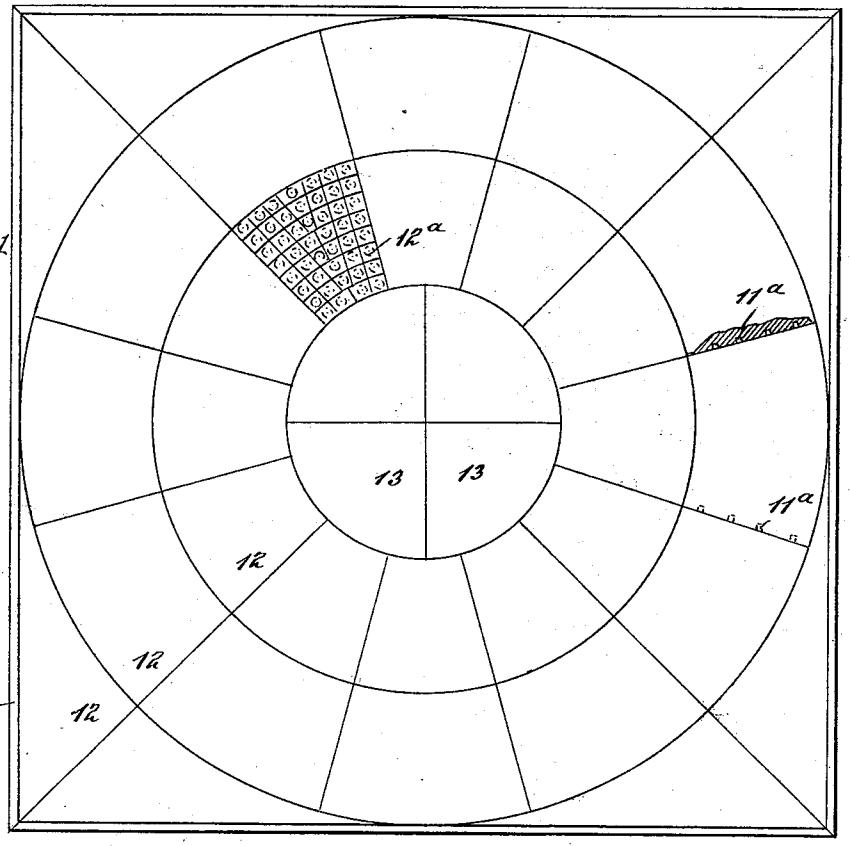
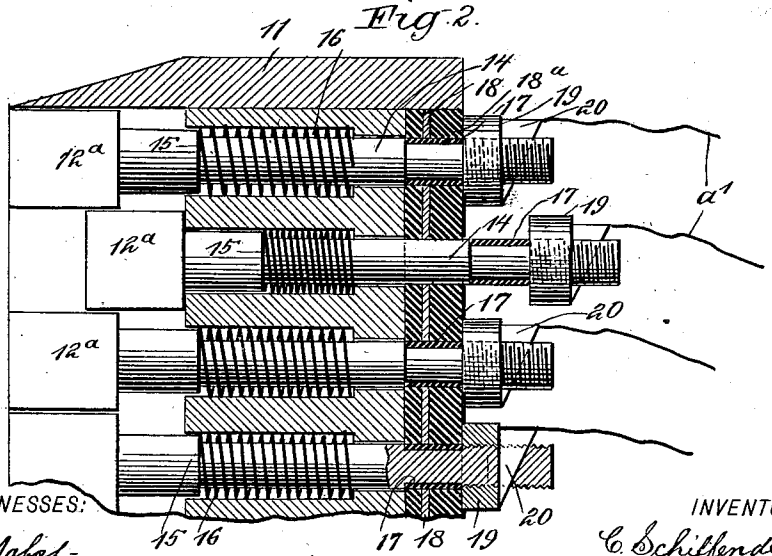


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig 3.

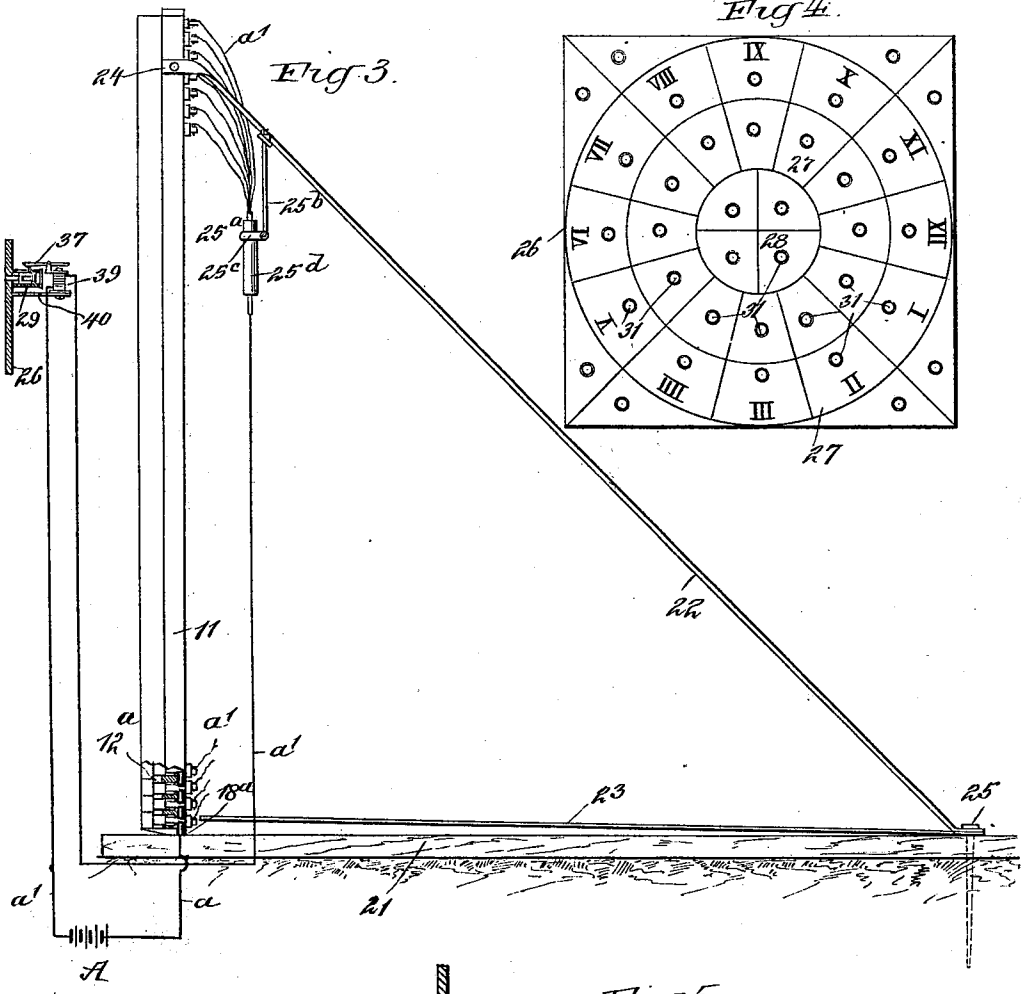


Fig 4.

Fig 5.

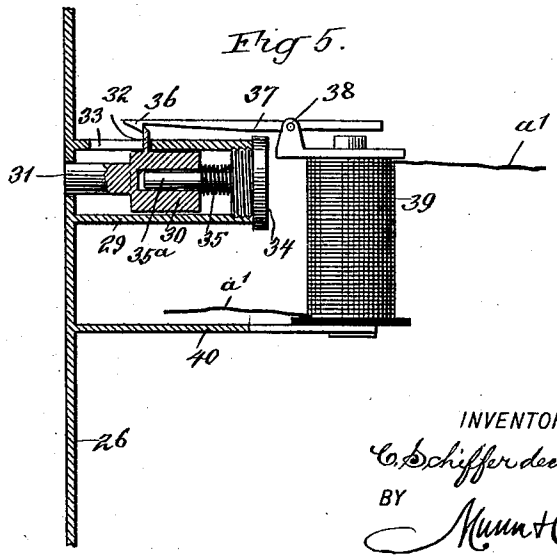
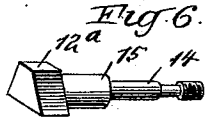


Fig 6.



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UNITED STATES PATENT OFFICE.

CHARLES SCHIFFERDECKER, OF FORT ASSINABOINE, MONTANA.

TARGET AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 521,049, dated June 5, 1894.

Application filed September 20, 1893. Serial No. 485,960. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SCHIFFERDECKER, of Fort Assinaboine, in the county of Choteau and State of Montana, have invented a new and Improved Target and Indicator, of which the following is a full, clear, and exact description.

My invention relates to improvements in targets such as are used in rifle practice, and the objects of my invention are to produce a target having substantially the usual appearance, and made up of a series of sections carrying slidable buttons adapted to be pushed inward under the impact of a bullet; to provide an indicator having spaces or sections thereon appropriately numbered and corresponding in location with the location of the target sections; to arrange an indicating pointer which is normally held in, but is adapted to project from, the face of the dial, there being an indicating pointer for each section of the dial; and to provide electrically-operated mechanism the circuit of which is closed by the impact of a bullet on the target, which mechanism is adapted to release a pointer of the indicator so that the pointer will protrude and show on the indicator the exact locality in which the bullet has struck the target. It will be observed that this arrangement enables an indicator to be arranged at the shooting stand, and the exact effect of a shot may be at once ascertained without bothering to inspect the target.

To these ends, my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken front elevation of the target. Fig. 2 is an enlarged detail sectional view of the push buttons on the target and one of their electrical connections. Fig. 3 is a diagrammatic view showing the connections between the target and the indicator. Fig. 4 is a face view of the indicator dial. Fig. 5 is a detail sectional view of a portion of the indicator and of the electrically-operated mechanism for releasing one of the indicating pointers; and Fig. 6 is a detail perspective view of one of the target push buttons.

The target 10, may be of any desired size and shape, and it is provided with a holding frame 11, which is divided into sections 12 and 13 in the usual way, the sections 12 being of segmental shape and arranged radially and at regular intervals, while the sections 13 form the bull's-eye of the target. The sections forming the body of the target are preferably dovetailed together, as shown at 11^a in Fig. 1. The sections 12 and 13 are filled with push buttons 12^a, which form the face of the target and which are held parallel with each other, these buttons as illustrated being of the same shape as the sections 12, but they may be of any desired shape. The buttons 12^a have rearwardly-extending bolts 14, which project through the back of the target and are adapted to slide as illustrated in Fig. 2, each bolt having on the end next the button, a shoulder 15 against which presses the spiral spring 16, which spring encircles the bolt and lies in an enlarged portion of the bolt bore, as shown clearly in Fig. 2. Each bolt 14 is provided with an insulating sleeve 17, which is countersunk in the bolt so that its outer face shall be flush with the face of the bolt, and this sleeve rests normally in a conducting plate 18, which is secured in the target back and which is held in insulating material 18^a. The bolts 14 project through the back of the target, and the rear end of each bolt is screw-threaded and provided with a nut 19 which limits the forward movement of the bolt and of the push button formed on the bolt.

In the rear end of each bolt is a conducting plate 20 which keeps the nut from unscrewing and to which a wire a' is connected, and this wire leads to one pole of the battery A including in its circuit one of the indicator magnets as hereinafter described, while the other pole of the battery connects by the wire a with the conducting plate 18. As the insulating sleeve 17 rests normally against the conducting plate, the circuit is kept open, but when the button 12^a is forced back, the conducting portion of the bolt comes opposite the plate 18 and the circuit is thus closed.

The target frame 11 rests upon a suitable base 21, which lies upon the ground, and the target is held upright by braces 22 and 23, the former extending diagonally upward from

the base 21 and having its upper end secured to the side edge of the target, as shown at 24 in Fig. 3, and its lower end fastened firmly to the base by a pin 25, which passes downward through the base and into the ground. The pin also fastens the outer end of the brace 23, which extends just above the base and is secured to the target frame. It will be understood that the target may be braced in any other suitable manner if desired. The wires a' preferably are united to form a cable 25^a (see Fig. 3), and a hanger 25^b, may be suspended from the brace 22, and connected to a clamping ring 25^c, in which is held a sleeve 25^d forming a holder for the cable.

The indicator has a dial 26, which is divided into sections 27 and 28, corresponding to the sections 12 and 13 of the target, and the radial rows of sections 27 are numbered consecutively from I to XII like the dial of a clock, as shown in Fig. 4. The sections are numbered in substantially the usual way, so that the score of a person's shooting may be reckoned in the customary manner, each shot counting according to its distance from the bull's eye. Behind each section 27 and 28 of the dial is a tube 29, in which is held a sliding plunger 30, having at its forward end a reduced pointer 31, which lies normally flush with the face of the dial, but which protrudes when the plunger 30 is released. The plunger 30 has a lug 32, which slides in a longitudinal slot 33 in the tube 29, and is adapted to engage a catch 36 on the armature lever 37, which lever thus serves to retain the plunger and pointer in their normal positions. The plunger 30 is normally thrown out by a spring 35, which encircles a pin 35^a which enters a bore in the plunger, and the pin is formed on the inner side of a screw cap or plug 34 which closes the end of the tube 29. The armature lever 37 is fulcrumed near the center, as shown at 38, and one end of it extends opposite the magnet 39, held on a support 40, and which connects with the battery A and with a target push button as above described. It will be seen then that when the magnet is energized, the lever 37 will be tilted so as to move the catch 36 and release the plunger 30, the latter immediately sliding forward so as to display the pointer 31. If desired, an electric bell of the usual kind may be included in the circuit so as to ring at the same time that the pointer is displayed.

The operation of the apparatus is as follows: When a bullet strikes one of the push buttons 12^a, the button is forced backward against the tension of its spring 16, thus forcing the conducting portion of the bolt 14 into contact with the plate 18 as already described. This closes the circuit, which is from the battery A through the wire a, the plate 18, the bolt 14, the wire a', and the magnet 39 back to the battery. When the magnet 39 is energized, it releases the appropriate pointer as above described, which being pushed out on the face of the dial, shows in which section of the target the bullet has struck, and the score may thus be made up from the dial as well as from the target.

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

1. An apparatus of the kind described, comprising a target made up of sections each of which is provided with inwardly movable buttons the shanks whereof have each partly conducting and partly non-conducting surfaces, a conducting plate through which the said shanks slide, an indicating dial having a plurality of indicating devices corresponding to the several target sections, electrically actuated mechanism for operating the said indicating devices, and circuit-closing devices for said mechanism, operated by the depression of the target buttons and by the conducting surface of the said buttons coming in contact with the said conducting plate, substantially as specified.

2. An apparatus of the kind described, comprising a target made up of sections, each section of which is provided with inwardly movable buttons, and an indicator having a dial face divided into sections corresponding with those of the target, spring-pressed pointers adapted to protrude through the faces of the dial sections, electrically-operated mechanism for releasing the pointers, and circuit-closing devices for said mechanism, operated by the depression of one of the target buttons, substantially as specified.

3. The combination, with the indicating dial provided with pointers and electrically-operated means of displaying them, of the target buttons having rearwardly-extending shanks, a conducting plate through which the shanks of the target buttons slide, insulating sleeves on the shanks of the target buttons, adapted to lie normally opposite the conducting plate, and electrical connections between the conducting plate, the button shanks, and the indicating mechanism, substantially as specified.

4. In an apparatus of the kind described, the combination with the indicating dial, of a slidable pointer adapted to move through the face of the dial, means, as a spring, for throwing the pointer outward, a catch for holding the pointer against the tension of the spring, and an electro-magnet for releasing the catch, substantially as specified.

5. The combination, with the perforated dial of the indicator, of spring-pressed plungers arranged behind the perforations and provided with pointers to slide through the said perforations, lugs on the plungers, swinging levers to engage the said lugs, and electro-magnets for tilting and raising the levers, substantially as specified.

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Witnesses:
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