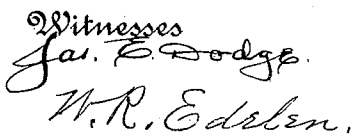


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2 SHEETS—SHEET 1.

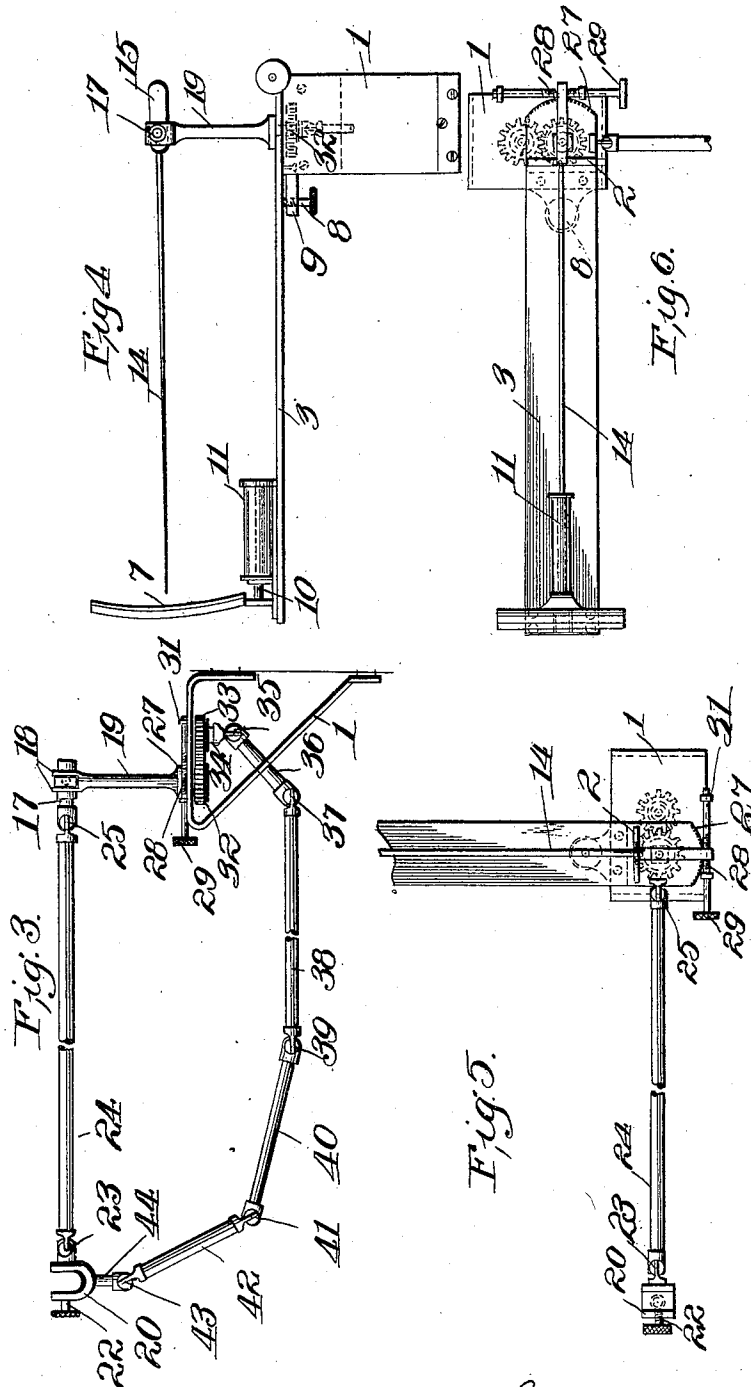


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 TARGET PRACTICE AIMING MACHINE.
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 2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

CHARLOTTE MONROE, OF BOSTON, MASSACHUSETTS.

TARGET-PRACTICE AIMING-MACHINE.

938,327.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed May 13, 1909. Serial No. 495,749.

To all whom it may concern:

Be it known that I, CHARLOTTE MONROE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Target-Practice Aiming-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in target practice aiming machines and the object of my invention is to produce a simple device of this character which is composed of a small number of parts, which cannot get out of adjustment, which is cheap, compact, light, and easily transported, and which will accurately indicate the correctness of the user's aim.

With this object in view, my invention consists in the construction and combinations of parts as hereinafter described and claimed.

In the accompanying drawings—Figure 1 is a perspective view of the complete device. Fig. 2 is a front view of the target. Fig. 3 is a side view of the mechanism for operating the pointer. Fig. 4 is a side view of the stand supporting the target. Fig. 5 is a partial top plan view showing the operating gears for the pointer. Fig. 6 is a top plan view of the stand and target supported thereby.

1 represents a bracket adapted to be attached to a wall or any suitable support and this bracket and the target supporting means may be provided with spirit levels, if desired. This bracket may be secured at a height to correspond with the standing, kneeling, or prone positions of marksmen.

3 represents a flat plate or table attached by hinges 2 to a part 30 which is adapted to swing around on the top of the bracket 1, being journaled on a reduced portion of the post 19. This plate is provided with a dovetailed slot 4, in which slot is mounted the end 5 of the target frame 6, to which a paper target 7, or any desired form of target, may be secured. The plate or table 3 may be adjusted up or down by means of a screw 8 and a bracket 9 carried by the main bracket 1. To the part 5 is attached a core 10 of a solenoid 11, and thus the usual spring returns the target into the position shown in

Fig. 1, if the solenoid is not in operation. The solenoid is connected to a storage or other battery 12, the terminal wires 13 of which are adapted to be secured to the trigger guard of the rifle or revolver used, so that pulling the trigger will close the circuit, thus actuating the solenoid.

14 represents a steel pointer having the end nearest the target sharp and the other end, as shown at 15, enlarged to form a counterbalanced weight. This pointer is mounted on a shaft 17, secured between ears 18 of a rotatable post 19, so that said pointer may move freely up and down between the ears 18.

20 represents a clip into which a rifle 21, or a revolver, is adapted to be placed, being fastened therein when the operator is practicing aiming, by means of the screw 22. This clip has attached to it a universal joint 23, which is attached to a rod 24, and which rod is attached by a universal joint 25 to the shaft 17. Usually I provide another universal joint 26 at about the center of the rod 24, but this is not strictly necessary. It is essential, however, that there should be no lost motion. It is obvious from the construction described that the moving of the butt of the rifle or revolver in a vertical direction will impart a corresponding movement to the pointer 14.

The post 19 passes through a hole in the supporting bracket 1 and is freely revoluble thereon. The end of the part 30 is rounded and is provided with a worm gear 27, which meshes with a worm 28, having an operating hand wheel 29, this worm being journaled in suitable bearings such as 31, on the top of the bracket 1. The post 19 and therefore the pointer 14 may be caused to revolve in a horizontal direction, by the motion of the rifle or revolver, by means of the following connections: 32 represents a gear wheel secured to the lower part of the post 19, which meshes with a gear wheel 33 on a shaft 34, supported underneath the top of the bracket 1 by any suitable means, (not shown), as by a shoulder on said shaft. The shaft 34 is connected by means of a universal joint 35 with the rod 36, which in turn is connected by a universal joint 37 with the rod 38, the rod 38 being in turn connected by a universal joint 39 with the rod 40. This rod 40 is connected by a universal joint 41 to a rod 42, which is con-

nected by a universal joint 43 to a pin or
 rod 44, fastened to the clamp or clip 20, as
 many of these rods and universal joints be-
 ing used as desired to communicate the mo-
 5 tion in a curved path from the clamp 20 to
 the gear wheel 33. Obviously by the con-
 nections thus described, the movement in a
 horizontal plane of the gun or revolver will
 cause a corresponding movement in a hori-
 10 zontal plane of the pointer 14. By the con-
 nections described, therefore, any movement
 of the gun or revolver, whether in a hori-
 zontal or vertical plane or in any combinations
 thereof, will be transmitted exactly to the
 15 pointer 14.

The operation is as follows: A gun or re-
 volver is placed in the clamp 20 and the set
 screw 22 tightened. The rifle or revolver
 is then aimed at a mark close at hand and
 20 the trigger pulled, whereupon the solenoid
 pulls the target up against the pointer 14,
 piercing the target. The target-carrying
 means is then adjusted so that the pointer
 14 will be opposite the center of the bull's
 25 eye, and the apparatus is then ready for use
 for sighting at a mark.

By my invention a person may be taught
 how to aim and shoot rifles or revolvers with-
 out the expenditure of ammunition. By
 30 clamping any rifle or revolver in the appa-
 ratus the person practicing may learn not only
 how to shoot, but also how to shoot his own
 rifle or revolver, becoming familiar during
 the practice with the trigger pull and "feel"
 35 of his own weapon. In practice every time
 the trigger is pulled, the target is pierced
 by the pointer, showing the marksman just
 how accurate his aim was at the moment of
 pulling the trigger. This is a very impor-
 40 tant feature, because many persons aim cor-
 rectly but grow nervous at the moment of
 pulling the trigger and "pull off", as it is
 often termed, destroying the accuracy of
 their aim.

45 The construction is simple and durable.
 The adjustments are easily made, only two
 being necessary to bring the pointer into
 line with the center of the bull's eye. It is
 not intended to produce absolutely parallel
 50 motion of the gun or revolver and pointer,
 but to duplicate the motion of the weapon
 when in the hands of a marksman.

Any ordinary type of universal joints may
 be used, provided that no lost motion occurs.
 55 Any desirable form of gearing may also be
 used, provided there is no lost motion. The
 miniature target may be of any desired type.

I claim:

1. In a target practice aiming machine,
 the combination of a pointer, a movable 60
 target, means for moving said target against
 said pointer, a clamp for holding a rifle or
 revolver, and means whereby the movement
 of the rifle or revolver in said clamp will
 produce a corresponding movement of the 65
 pointer, consisting of universal joint con-
 nections for moving the pointer in a vertical
 plane, a support in which said pointer is
 journaled, and gearing and universal con-
 nections from said clamp to said support for 70
 revolving the latter in a horizontal plane,
 substantially as described.

2. In a target practice aiming machine,
 the combination of a supporting bracket, a 75
 target, means for supporting said target,
 means for adjusting said target-supporting
 means both horizontally and vertically, a
 pivotally mounted counterbalanced pointer,
 a movable post supporting said pointer,
 a clamp into which a rifle or revolver is 80
 adapted to be placed, universal connections
 between said clamp and said pointer, where-
 by motion in a vertical plane of said clamp
 will be transmitted to said pointer, gearing
 for rotating said post, and universal connec- 85
 tions between said clamp and said gearing,
 whereby a horizontal movement of said
 clamp will rotate said post, and means for
 bringing said target against said pointer,
 substantially as described. 90

3. In a target practice aiming machine,
 the combination of a supporting bracket, a
 flat plate composed of two parts hinged to-
 gether, carried by said bracket, a worm and
 worm gearing for adjusting said plate in a 95
 horizontal direction, a screw for adjusting
 one end of said plate vertically, a target
 movably supported by said plate, a pivotally
 mounted, counterbalanced pointer, a post in
 which said pointer is mounted, said post 100
 being provided with a gear wheel, a clamp
 in which a rifle or revolver is adapted to be
 secured, universal connections between said
 clamp and said pointer, universal connec-
 tions between said clamp and the gearing by 105
 which said post is operated, and a solenoid
 for bringing said target into contact with
 said pointer, substantially as described.

In testimony whereof, I affix my signa-
 ture, in presence of two witnesses.

CHARLOTTE MONROE.

Witnesses:

F. K. PARKS,
 H. S. PALMER.