C. FENTON.

TARGET FOR SMALL ARMS PRACTICE.

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1,424,632. Patented Aug. 1, 1922.

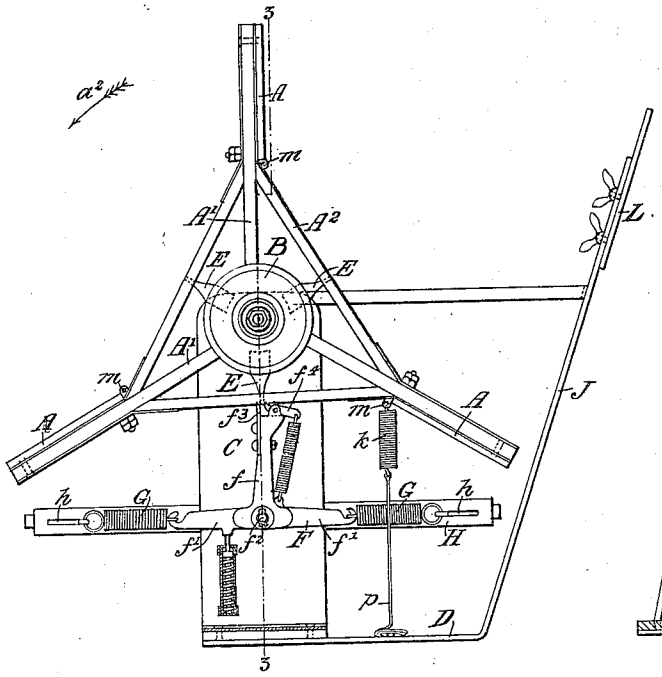


Fig. 1.

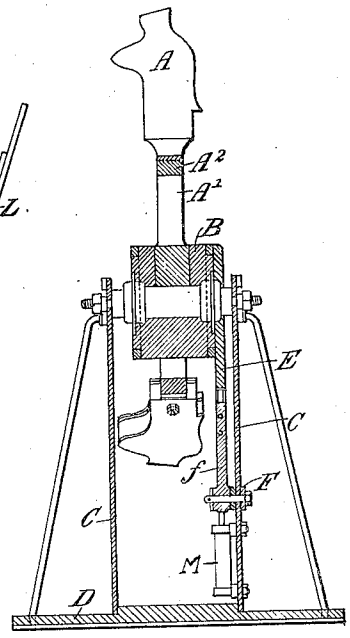


Fig. 3.

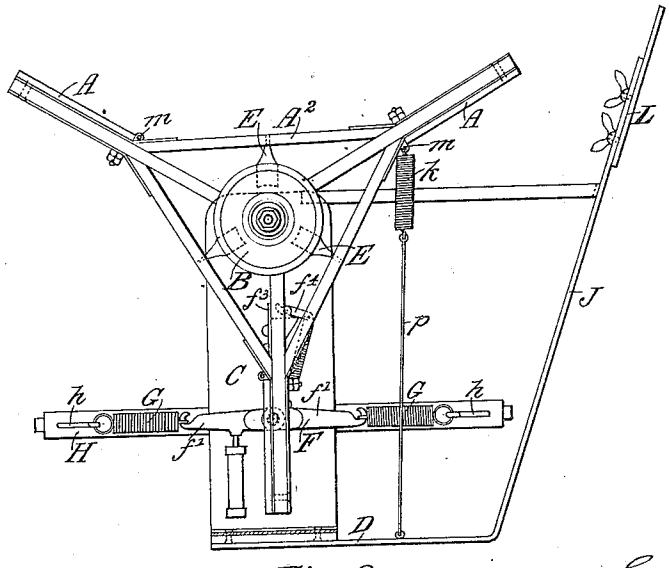


Fig. 2.

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TARGET FOR SMALL-ARMS PRACTICE.

1,424,632. Specification of Letters Patent. Patented Aug. 1, 1922.

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To all whom it may concern:

Be it known that I, CECIL FENTON, a subject of the King of Great Britain, residing at Brocton, in the county of Stafford, England, have invented certain new and useful Improvements in Targets for Small-Arms Practice, of which the following is a specification.

This invention relates to targets for small arms practice of the type in which the target, which is normally vertically disposed, is horizontally pivoted and adapted to move back and disappear under the impact of a bullet, after which it returns to its normal position by a spring or weight.

According to this invention, the target is mounted to turn freely upon a horizontal axis, preferably upon ball bearings and is primarily so counterweighted that it will remain at any position at which it may have come to rest, but the target has a forward arm which moves upwards when the target moves back, and there is connected to the arm a spring which returns, or assists in returning, the target after it has moved back under the impact. The target is so arranged that when struck by a bullet it moves back sufficiently to disappear for a short time behind a suitable shield or earthwork.

The spring is preferably in the form of a coil spring depending from the arm and connected to a fixed point through a cord or other flexible connector, the latter having a certain amount of slack, so that the target may move back through a certain angle before the spring is put in tension.

Detent mechanism is provided, to retain the target in its normal position, and may consist of a vertical arm extending upward from a horizontal pivot and being spring pressed in such a manner that it is returned to its vertical position after being moved to either side. This arm carries a spring pressed pawl which normally engages with a downward finger of the target and prevents the target moving back inadvertently. Under the impact of a bullet, however, the finger forces forward the pawl and the arm which carries it until the finger rides over the pawl and disengages from it, when the arm and pawl return to their normal positions. When the target is returned by the coil spring and cord, the finger clicks over the pawl and is then secured thereby. A suitable stop is provided to limit the forward movement of the target and this may consist of an upward extension of the arm which carries the pawl, which extension, by coming in the path of the finger, provides an elastic stop thereto.

In the accompanying drawings:—

Figure 1 is a side elevation of a target constructed according to this invention, but with the nearer standard removed.

Figure 2 is a view corresponding to Figure 1, but showing the target just after it has moved back under the impact of a bullet and before it has returned to its normal position under the action of its spring; and,

Figure 3 is a section taken in the planes indicated by the irregular line 3, 3, of Figure 1.

Three target plates A, which each constitute a target proper, are fixed to the outer ends of arms A′, conveniently of wood, which are fixed at their inner ends to a nave or boss B, mounted to turn about a fixed axis carried in the upper ends of standards C, which are supported upon a bed D. The target plates A may be of any desired shape, such for instance as representing, or roughly so, a human form, and are faced with a thick metal sheet. The arms A′ are strengthened by braces A^2 which, in effect, constitute a frame of triangular construction. Radially mounted upon the boss B at points mid-way between the arms A′ are three fingers E, each of which lies in a plane which is at one side of the path in which the target plates A turn. An inverted T-lever F having an upward arm f and normally horizontal arms f' is pivoted at f^2 to one of the standards C and the arms f' are engaged respectively with the inner ends of springs G which are connected at their outer ends with eye pieces h which are rigid with a bar H which is fixed to the same standard. The upward arm f of the T-lever F carries on one side a plate f^3 and on the other a spring pressed pawl f^4 and one of the fingers E lies normally between said plate f^3 and the nose of the pawl f^4. k is a coil spring attached at one end to one of three eyes m, each positioned on one of the members A^2, just where it joins to the front face of the respective target plate. The other end of the coil spring is connected to a cord p, the lower end of the latter being secured to the base of the apparatus, a certain amount of slack being allowed for a

purpose hereinafter made clear. J is a metal shield having an adjustable portion L.

The three target plates A′ may be of different contours the purpose being to use one at a time. They can be readily changed, however, by unfastening the spring k from the eye m to which it happens to be attached and reattaching it to the eye of another target plate.

When the target, which is exposed, is struck by a bullet, it moves back in the direction of the arrow a^2 and the finger E which is disposed opposite to the exposed target plate presses forward the pawl f^4 and with it the arm f by which it is carried, against the force of the springs G until the finger E rides over the pawl. The arm f then springs back to its normal position. The frame carrying the target continues to move on, raising the spring k and taking up the slack of the cord p. As soon as the cord pulls taut the spring k is expanded by the momentum of the frame, but it overcomes such momentum and causes the frame to return, rotating in the opposite direction until the same finger E, which previously engaged with the pawl f^4 rides over the same and reengages, butting up against the plate f^3 and thereby causing the movement of the frame to be stopped. The plate f^3 and the arm f go back somewhat in taking up the momentum of the frame, but not sufficiently to allow the finger E to ride over the plate f^3. The springs G serve to bring the finger E, which is retained between the plate f^3 and the pawl f^4 to such position that the exposed target plate A is vertical. M represents a dash-pot which acts as a buffer against the return movement of the frame, and assists in cushioning the backward movement of the arm f when the finger E strikes the plate f^3.

If the target is struck by a glancing bullet, its movement may be very slight, but, owing to the counter-balancing of the frame and the freedom of its bearing, which, as stated above, may be a ball bearing, it will be returned to its normal position by the weight of its coil spring and cord.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a target plate mounted to turn freely upon a horizontal axis, a counterweight to such target plate, an arm which moves round when the target moves back under the impact of a bullet, and a spring acting to impel said arm in a direction to cause the target to return to its normal position.

2. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a target plate mounted to turn freely upon a horizontal axis, a counterweight to such target plate, an arm which moves round when the target moves back under the impact of a bullet, a coil spring, and a cord with a certain amount of slack, connected together and to the said arm, and acting to impel said arm in a direction to cause the target to return to its normal position.

3. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a plurality of target plates mounted upon a structure which turns freely upon a horizontal axis, a plurality of said target plates acting as a counter-weight, a spring connected in relation to one of said target plates and adapted to impel said target plate in a direction to cause the target plates to return to the normal position.

4. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a target plate mounted to turn freely upon a horizontal axis, a counterweight to such target plate, a forward arm which moves upwards when the target turns back under the impact of a bullet, and a coil spring connected at one end to said forward arm and at the other to a cord which is connected at its other end with a fixed abutment and has a certain amount of slack, whereby the first turning back of the target plate takes up the slack of the cord, and whereby, when said slack is taken up, the spring operates to return the target plate to its normal position.

5. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a target plate mounted to turn freely upon a horizontal axis, a counter weight to such target plate, an arm which moves round when the target moves back under the impact of a bullet, a spring acting to impel said arm in a direction to cause the target to return to its normal position, a finger rigidly mounted in relation to the target plate, an abutment against which said finger is adapted to come when the target returns to its normal position, and a pawl mounted in relation to said abutment over which pawl the finger rides, and is retained thereby in close proximity to the abutment.

6. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a target plate mounted to turn freely upon a horizontal axis, a counterweight to such target plate, an arm which moves round when the target moves back under the impact of a bullet, a spring acting to impel said arm in a direction to cause the target to return to its normal position, a finger rigidly mounted in relation to the target plate, a spring pressed abutment against which said finger is adapted to

come when the target returns to its normal position, and a spring pressed pawl mounted in relation to said abutment over which pawl the finger rides, and is retained thereby in close proximity to the abutment.

7. A target for small arms practice, adapted to disappear under the impact of a bullet, comprising a plurality of target plates mounted upon a frame which turns freely upon a horizontal axis, any one of said target plates being adapted to act as the target proper, the rest of said target plates acting as a counterweight, and a coil spring which may be attached at one end to any of the arms carrying the target plates, and connected at its other end to a cord having a certain amount of slack and connected to a fixed abutment, whereby after one of the target plates has been struck by a bullet it yields back causing the cord to become tightened and the spring to impel the respective arm in a direction to return the target plate, which has been struck, to its normal position, and whereby any of said target plates, at will, may be exposed by changing the spring and cord from one arm to another.

8. A target for small arms practice adapted to disappear under the impact of a bullet, comprising a plurality of target plates mounted upon a frame which turns freely upon a horizontal axis, any one of said target plates being adapted to act as the target proper, the rest of said target plates acting as a counterweight, and each of said target plates being adapted alternatively to act as a forward arm, and a spring adapted to impel said arm in a direction to cause the target plate, which has been exposed and struck by the bullet, to return to its normal position, a plurality of fingers on the frame, one for each target plate and disposed at the opposite side of the axis thereto, a spring pressed abutment against which each of said fingers abuts to stop the movement of the frame as it is returned to its normal position, and a pawl mounted in relation to said abutment, and over which said finger rides, said pawl preventing the rebound of said finger from said abutment.

In witness whereof I have hereunto signed my name this 23rd day of September 1920 in the presence of two subscribing witnesses.

CECIL FENTON.

Witnesses:

FRANK A. HUGHES,

THOMAS GIBSON.