J. A. MARTENS.

APPARATUS FOR TEACHING SHOOTING.

APPLICATION FILED JAN. 5, 1909.

944,368.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

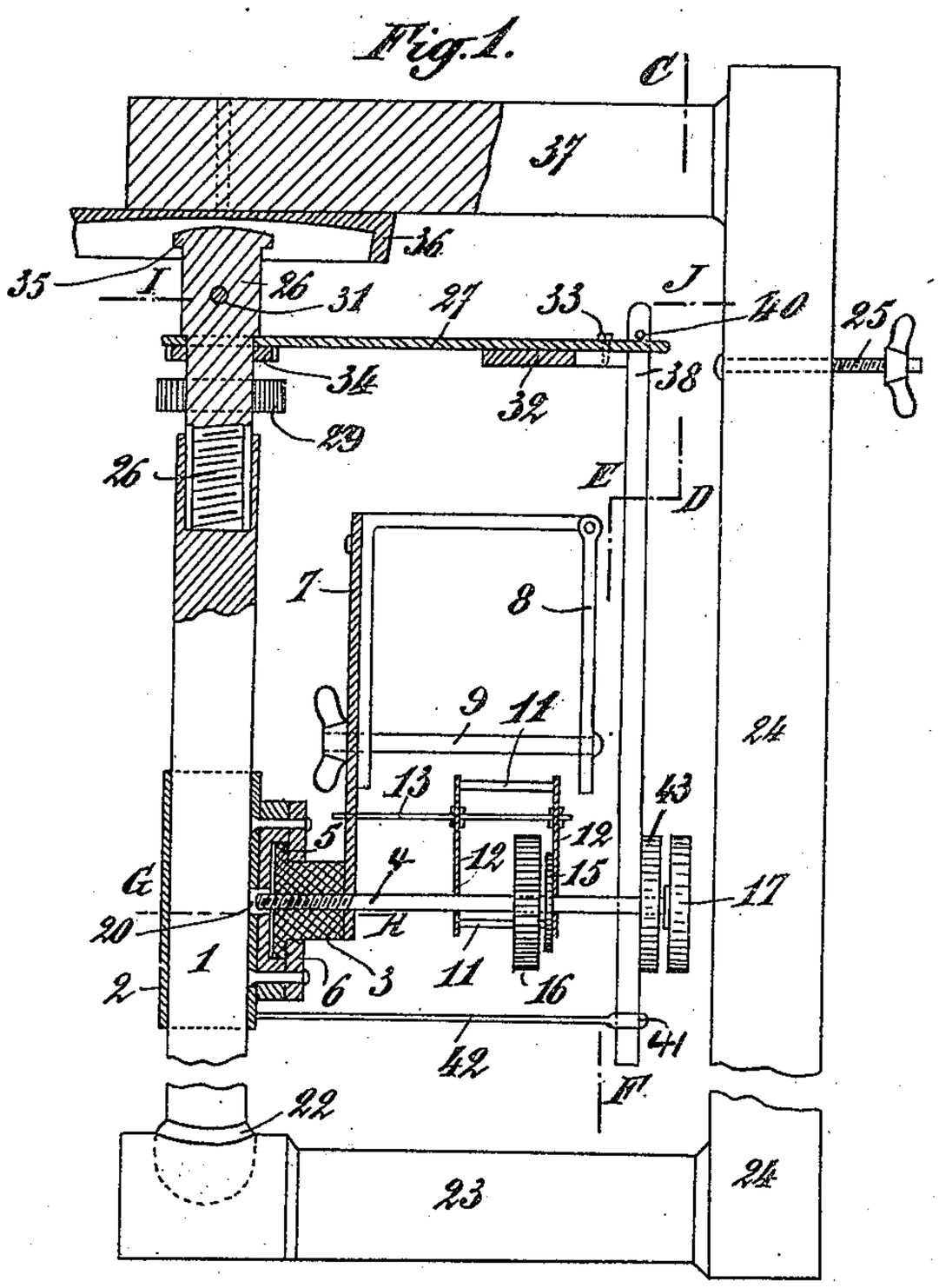
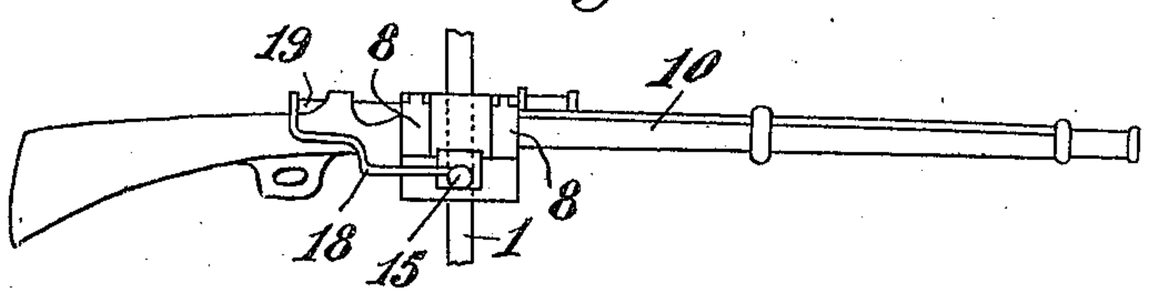


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 2.

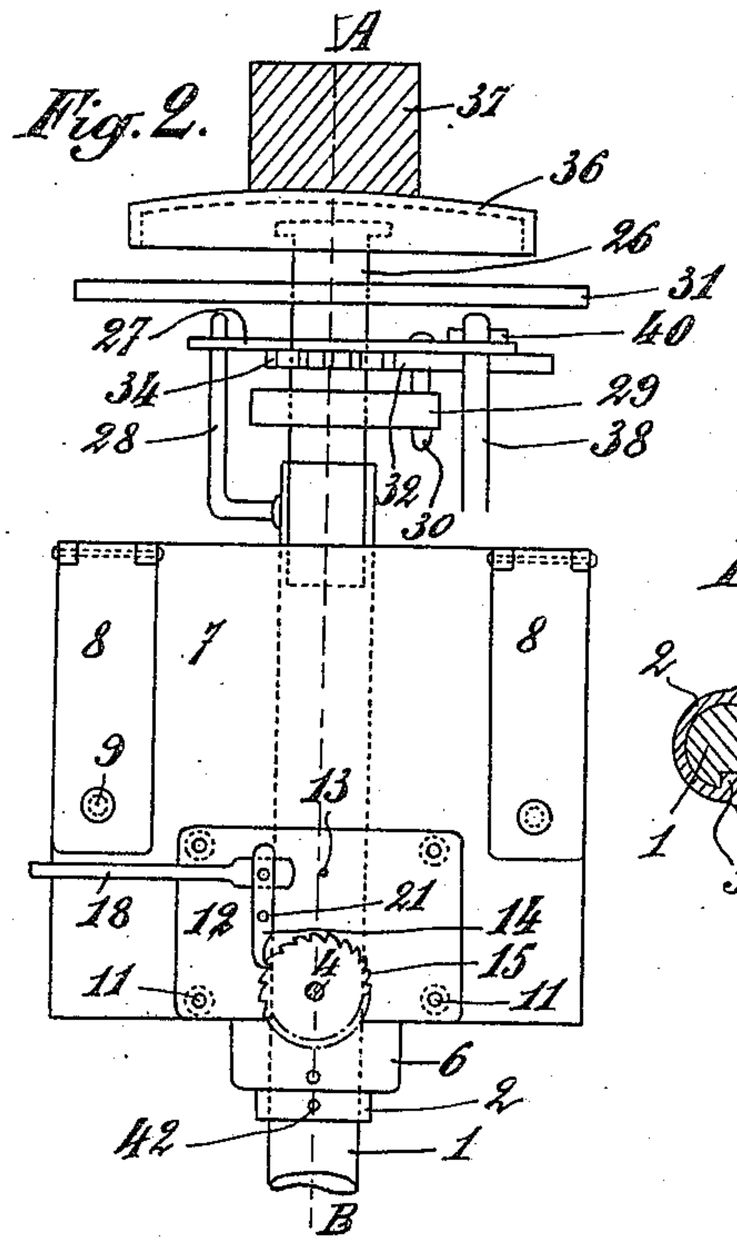


Fig. 3.

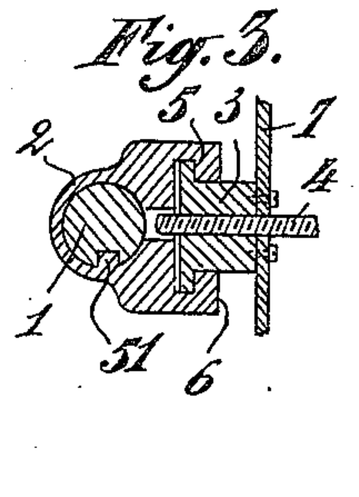
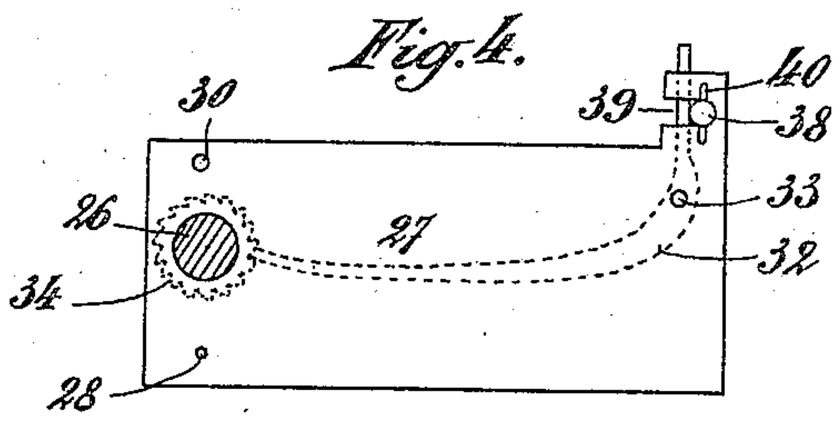


Fig. 4.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR TEACHING SHOOTING.

944,368. Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed January 5, 1909. Serial No. 470,891.

To all whom it may concern:

Be it known that I, JOSEPH ADOLPHE MARTENS, a subject of the King of Belgium, residing at Ostende, Belgium, have invented certain new and useful Improvements in Apparatus for Teaching Shooting; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to apparatus for use in acquiring the art of aiming a rifle, pistol or other hand fire-arm accurately and has for its object to provide a device whereby the accuracy of the marksman's aim may be ascertained without the use of a projectile and will permit of the free movement of the fire-arm in the hands of the marksman while sighting at a fixed target and at the same time, provide means that will automatically lock the weapon in the exact position in which it was held with relation to the target at the time the trigger was pulled in order that the accuracy of the aim may be subsequently ascertained by observation of the instructor looking along the course of the gun while in its fixed position. In order that a person may become accustomed to the explosion blank cartridges may be used.

With these objects in view the invention consists in providing a frame having stationary members that may be readily attached to a fixed support; a freely movable member connected with the stationary members, a clamp for the gun adjustably connected with the movable member and mechanism connected with a moving member of the gun for automatically locking the clamp to the movable members and the latter to the fixed members of the frame.

The invention consists also in details of construction and combination of parts hereinafter more particularly set forth and specified in the claims.

My invention is illustrated by the accompanying drawings in which:—

Figure 1 is a vertical section on line A. B. of Fig. 2, that is to say normal to the axis of the gun or rifle. Fig. 2 is a vertical section on line C. D. E. F, of Fig. 1. Fig. 3 is a horizontal section on line G. H. of Fig. 1. Fig. 4 is a horizontal section on line I. J. of Fig. 1. Fig. 5 is a section on a smaller scale on line E. F. of Fig. 1 illustrating the method of mounting the gun or rifle.

The same reference characters indicate like parts in all the figures.

1 designates a circular rod, which is supported as hereinafter described, on which slides a sleeve 2 in which is rotatably mounted a cylindrical piece 3 through which passes a rod 4, having screw threads engaging threads in the piece 3. The piece 3 can rotate freely in the sleeve 2 about an axis perpendicular to the rod 1 but is limited in its movement along said axis by a flange 5 abutting against a plate 6 fixed to the sleeve 2. To the piece 3 is fixed a plate 7 to which the gun or rifle as 10, Fig. 5 is fixed by means of clamps 8 and screws 9.

The rod 4 passes through two plates 12 which are connected to each other by cross stays 11. These plates move backward and forward on the rod 4 and are prevented from rotating by a tie rod 13 which is fixed in said plates and slides in the plate 7. A pawl 14, Fig. 2, is pivoted at 21, on one of the plates 12 and engages a ratchet wheel 15 which is keyed to the rod 4. The rod 4 is acted upon by a coiled spring 16, Fig. 1, fixed at one end to said rod and at the other end to the plate 12, or to one of the cross stays, so that said rod is rotated by means of the spring and forces its way into the piece 3 by means of its threads working in the threads of the piece 3. By turning the rod 4 in the reverse direction by means of the wheel 17 the spring 16 is wound up. The pawl 14 is connected to a bar 18 which is connected to one of the loading or firing parts of the weapon so as to move when the weapon is fired, and to disengage the pawl from the teeth of the wheel 15.

Instead of the bar 18 I may use a cord or wire. The bar or cord may be actuated either by the bolt, the hammer, or by the trigger of the weapon. In the arrangement shown in Fig. 5 the bar 18 is connected to the bolt 19 and is actuated by the forward movement thereof.

The rod 1 on which the sleeve 2 slides is connected to the sleeve by means of a key 51, Fig. 3 on the sleeve 2 taking into a keyway in the rod. The rod 1 rests at its lower end in a cross bar 23 rigidly connected to

an upright 24, said rod being formed or fitted with a cap 22 which fits into a suitable recess or socket in the cross bar 23.

The apparatus may be fixed to a wall or other suitable support by means of screws 25.

The upper part of the rod 1 carries a screw 26 which passes through a plate 27 which rises and falls when the screw is rotated, the said plate being prevented from rotating on the screw by the upright 28 secured to the rod 1. To the screw 26 is secured one end of a coiled spring 29 the other end of which spring is fixed to a rod 30 supported by the plate 27. The spring 29 is wound up, when the screw is lowered, by means of the bar 31; these parts are maintained in this position by a pawl 32 pivoted at 33 to the plate 27 and engaging with the teeth of a ratchet wheel 34 which is keyed on the screw 26. When the screw 26 is released by the disengagement of the pawl 32 effected as hereinafter described, it rises under the action of the spring 29 and its head 35 which moves with the rod 1 abuts against the interior concaved surface of a cap 36 carried by a cross bar 37 connected to the upright 24. The pawl 32 abuts with its end against a rod 38 which is suspended in a slot 39, Fig. 4, of the plate 27 by means of a cross pin 40. The lower part of this rod, Fig. 1, traverses an eyelet 41 in a cross piece 42 secured to the sleeve 2 and said rod constantly presses against a plate 43 keyed to the shaft 4. It will be seen that this arrangement allows of the displacement of the weapon: 1st, by the movement of the sleeve 2 along the rod 1; 2nd, by rotation of the rod 1 in the socket in the bar 23; 3rd, by rotation of the part 3 in the sleeve 2 and 4th by the universal movement of the rod 1 on the cap 22.

When as a consequence of firing the ratchet wheel 15 has been released, the rod 4 under the action of the spring 16 passes through an opening 20 in the sleeve 2 and presses with its end on the rod 1 and holds this sleeve fixed; on the other hand the flange 5 of the part 3 owing to this movement bears against the plates 6 and is likewise fixed, so that owing to firing the plate 7, and consequently the weapon 10 fixed thereto are immovably connected to the rod 1. The rod 1 is itself held immovable owing to the release of the wheel 34 which is effected by the tilting of the pawl 32 about its pivot 33 under the action of the rod 38, which is caused to turn about the eyelet 41 as a center, owing to the pressure it undergoes from the plate 43 carried along by the rod 4. The release of the wheel 34 allows the screw 26 to rotate under the action of the spring 29, and to rise until it reaches the concaved surface of cap 36, and thus holds the rod 1 immovable.

I claim:—

1. In an apparatus of the character described, the combination with a fire-arm, of a support therefor having universal movement and mechanism directly connected to and operated by a movable member of the fire-arm to lock the support in a fixed position.

2. In an apparatus of the character described, the combination with a fire-arm, of a rigid support, a universally movable member mounted in and adapted to be connected with the support, a clamp for the fire-arm connected with the movable member, means to lock the movable member to the rigid support, means to lock the clamp to the movable member and means to connect said locking means with the firing mechanism of said fire-arm.

3. In an apparatus of the character described, the combination of rigid supporting members, a universally movable member mounted in one of said supports, a slide on the movable member, a clamp pivotally connected with the slide, means to lock the movable member to the rigid supporting members and means to lock the clamp and slide to the movable member.

4. In an apparatus of the character described the combination with a fire-arm, of rigid supporting members, a universally movable support mounted in one of said members, a screw mounted in the support movable into engagement with the other supporting member, a spring for rotating the screw, a sleeve slidable and rotatably mounted on the support, a bearing connected with the sleeve, a screw-rod mounted in the bearing, a spring to rotate the screw-rod, a clamp slidable on the screw-rod, means to normally hold said spring under tension, means operated by the movement of the firing mechanism of the fire-arm to release the spring for rotating the screw-rod, and means operated by the movement of the screw-rod to release the spring for rotating the screw.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

JOSEPH ADOLPHE MARTENS.

Witnesses:

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