

APPARATUS FOR TEACHING GUN PRACTICE.

APPLICATION FILED MAY 26, 1904. RENEWED MAR. 26, 1907.

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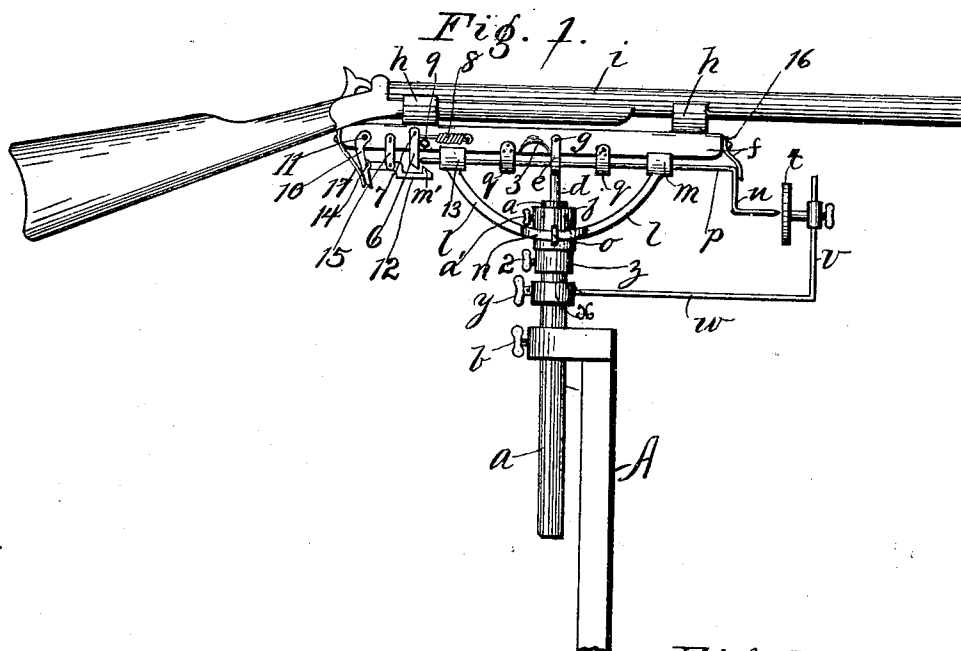


Fig. 2.

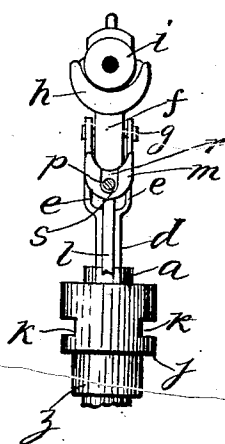


Fig. 3.

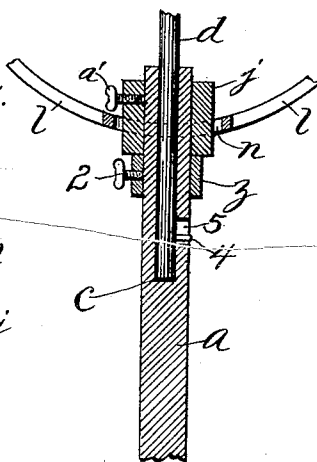
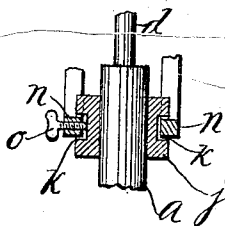


Fig. 4.



Witnesses
C. Sedgwick
J. M. Howard.

James Whiteside
Inventor
By his Attorney A. P. Thayer.

UNITED STATES PATENT OFFICE.

JAMES WHITESIDE, OF NEW YORK, N. Y.

APPARATUS FOR TEACHING GUN PRACTICE.

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To all whom it may concern:

Be it known that I, JAMES WHITESIDE, a subject of the King of England, and a resident of the borough of Manhattan, New York city, and State of New York, have invented certain new and useful Improvements in Apparatus for Teaching Gun Practice, of which the following is a specification.

My invention relates to apparatus for teaching gun practice, the essential characteristics of which are a universally jointed gun support subject to manipulation by the operator in firing the gun, a pointer in practical parallelism with the gun and following its deviations, a target in close proximity to the gun, with its bull's-eye in alignment with the pointer when the gun is correctly sighted with relation to the object aimed at, and means to make a record on the target at the instant of firing in the same relation to the bull's-eye as the relation of the gun sight to the object aimed at, and thus record the work of the operator without the actual expenditure of ammunition and expense of the same.

My present invention consists of improvements of the apparatus for making the record, also improvements whereby the construction is simplified, and in the apparatus whereby the operator may take the weight of the gun in his hands while firing to render the practice more like the actual common practice as hereinafter described and claimed reference being made to the accompanying drawings in which:—

Figure 1, is a side elevation of my improved apparatus with a gun in position thereon. Fig. 2, is a detail in elevation enlarged and showing a transverse section of the pointer. Fig. 3, is a detail in central vertical transverse section also enlarged. Fig. 4, is a detail partly in central vertical transverse section, and partly in elevation and also enlarged.

A represents a supporting standard of any approved form and construction on which a vertically adjustable, and rotatory staff *a* is supported and is secured in different positions by the set screw *b* for adjusting the height of the apparatus to suit the height of the operator; said staff has a deep central vertical socket *c* in the upper end in which a spindle *d* is carried which has the forked upper end *e* in which a horizontal bar *f* is pivoted at *g*, said bar having seat pieces

h, one near each end in which the gun *i* may rest.

On the upper end of staff *a* is a collar *j* which can slide up and down and turn on said staff with a set screw *a'* for fixing it in position and it has a slide-way *k* in each of two opposite sides wherein lateral supporting arms *l*, carrying seats *m* at their upper ends for the bar *f*, are arranged by means of branches *n* as an adjustable support permitting the bar *f* to be tilted slightly on its pivot *g* with a set screw *o* to secure them and hold said bar in any desired set position; the bar *f* rests in these seats so that it may be lifted slightly for taking the weight of the gun in the hands. A pointer rod *p* is suspended from the underside of the bar *f* by clips *q* attached to the bar and holding the rod in practically parallel relation to the gun and so that it may reciprocate slightly. The bar seats *m* are notched at *r* for affording space for the rod *p* and for seating said rod in them at *s* when the bar is seated for more stable support of the rod. This pointer rod extends a suitable distance forward under the gun for co-action with a target *t* to record by indentations or other marks on the target a visual chart showing the accuracy or inaccuracy of the aim of the operator. The pointer has a downward offset at *u* enabling the target to be set lower for greater clearance from the gun. The target is mounted on the upright member *v* of an arm *w* carried on a collar *x* mounted on staff *a*, so as to shift up and down, and to rotate thereon for adjustment, with a set screw *y* for securing it in position, and the said target is adjustable vertically on said member. The collar *j* can turn freely on staff *a*, and a vertically adjustable collar *z* with a screw *2* for setting it in position is applied under collar *j* for controlling said position, which will preferably be such that spindle *d* will rest on the bottom of socket *c* when collar *j* rests on collar *z*.

The bar *f* has a hand bearing notch *3* in its lower side to facilitate grasping it with the hand supporting the barrel of the gun in lifting it for firing; the gun is only to be lifted sufficiently for transferring the weight of the gun from the supporting staff *a*, and it is desirable not to lift it more than is necessary, which is prevented by the stop stud *4* set in spindle *d* through a slot *5* of staff *a*, the length of which slot controls the range of the lift.

For actuating the pointer *p* to make the records a hammer lever 6 is pivoted on the bar *f* at 7, and extended downward a short distance behind the rear end of the pointer and in close proximity to it with a spring 8 connected to it for thrusting it against the end of the pointer when retracted and released and with a stop 9 to limit the forward thrust of the hammer. For retracting the hammer a trigger 10 is pivoted to the bar *f* at 11 behind the hammer to which a hammer retracting latch 12, having a catch *m'*, adapted to engage the lower end of the hammer lever, is pivoted at 14 with a swinging hanger 15 supporting it so that when the latch goes forward its bevel catch *m'*, will spring under the bevel end of the hammer and when the latch is swung back on its pivot, to an inclined position it will escape from the catch and strike the pointer; a retracting spring 16 may be employed to detach the pointer from the target, and the trigger may have a retracting spring 17 for resetting the hammer actuating latch.

In the use of the apparatus the gun will first be sighted, while at rest on the supports, at some object at a distance the same as if it were intended that the object should be fired at in the usual way, and the apparatus is then fixed in position by duly setting collar *j* by the set screw *a'*, and the bar *f*, by the set screw *o*; the target *t* will then be adjusted so that the bull's-eye registers with the end of the pointer, or as much higher as the gun is to be lifted in firing, and set screws *a'* and *o* are slackened off, so that the gun and support are then subject to the deviating holding of the gun by the operator whereby the target being fixed will show the deviations of the sighting.

The constructions and arrangements of the pointer, hammer and trigger devices and the means of shifting the weight of the gun from the gun support to the hands of the operator may of course be modified in various ways and I do not limit myself in these respects to the particular devices herein shown and described.

What I claim as my invention is:—

1. The combination with a universal joint supported gun support which is subject to direct manipulations of the operator in firing the gun, of a pointer, means connecting the gun support and pointer whereby practical parallelism of the pointer with the deviating line of the gun-sight results from the deviations of the gun, said means consisting of the seat carrying bar, the vertically shifting and rotating bar supporting spindle having a limited vertical movement with respect to its support, and the socketed support for said spindle, a substitute target adjustably mounted upon said socketed support in close proximity to the pointer, means to cause the pointer to make a record on

the target simultaneously with the firing corresponding in its relation to the bull's-eye with the relation of the line of sight to the object aimed at, and means for automatically retracting the pointer, substantially as set forth.

2. The combination with a universal joint supported gun support which is subject to direct manipulation of the operator in firing the gun, of a universal joint supported pointer, means connecting the gun support and pointer whereby practical parallelism of the pointer with the deviating line of the gun-sight results from the deviations of the gun, a substitute target in close proximity to the pointer, and means to thrust the pointer against the target simultaneously with the firing of the gun to make thereon a record in relation to the bull's-eye mark corresponding with the relation of the line of the gun-sight at the moment of firing to the object aimed at, said means consisting of the reciprocating pointer carrying rod, carried on the gun support, hammer lever and spring acting against the end of the rod, and means for retracting and tripping the hammer lever.

3. The combination with a universal joint supported gun support which is subject to direct manipulation of the operator in firing the gun, and a pointer carried in parallel relation to the gun support, of a substitute target in close proximity to the pointer, and means to cause the pointer to make on said target simultaneously with the firing, a record in the relation to the bull's-eye corresponding with the relation of the line of the gun-sight to the object aimed at, said means consisting of the seat carrying bar, and vertically shifting and rotating bar supporting spindle, the support for said spindle, said means consisting of the reciprocating pointer carrying rod, carried on the gun support, hammer lever and spring acting against the end of the rod, and means for retracting and tripping the hammer lever.

4. In a universal joint supported gun support and a pointer carried thereon in parallel relation to the gun and subject to the manipulations of the operator in firing the gun, the combination with the joint mechanism, of the gun seat device mounted thereon in a connection enabling the lifting of the gun in the act of firing and the maintenance at the same time of said connection for following the deviating movements of the gun said means consisting of the gun seat support, spindle carrying said gun seat support, socketed support for the spindle, and means to limit the rise of the spindle, a substitute target in close proximity to the pointer and means to cause a record on the target by the pointer simultaneous with the firing said record making means consisting of the reciprocating pointer carrying rod, 130

carried on the gear support, hammer lever and spring acting against the end of the rod, and means for retracting and tripping the hammer lever.

5 5. The combination with the gun seat carrying bar and the pointer carried thereon, and with the supporting staff, of the bar supporting and tilting arms, grooved rotating collar on the staff receiving the
10 branches of said arms, the set screws for securing said collar and tilting arms, and the forked spindle carried in the staff socket and having the bar pivoted in its fork.

15 6. The combination with the universal joint supported and vertically shifting gun support and pointer, and means for actuat-

ing the pointer for record marking, of the substitute target located in close proximity to the pointer and in adjustable relation thereto, and means to limit the vertical shift- 20
ing of the said gun support said means consisting of the rotating seat bar supporting spindle, socketed support for the spindle, slot in the socketed support and the stud in the spindle. 25

Signed at New York this 15th day of May 1904.

JAMES WHITESIDE.

Witnesses:

C. SEDGWICK,
J. M. HOWARD.