

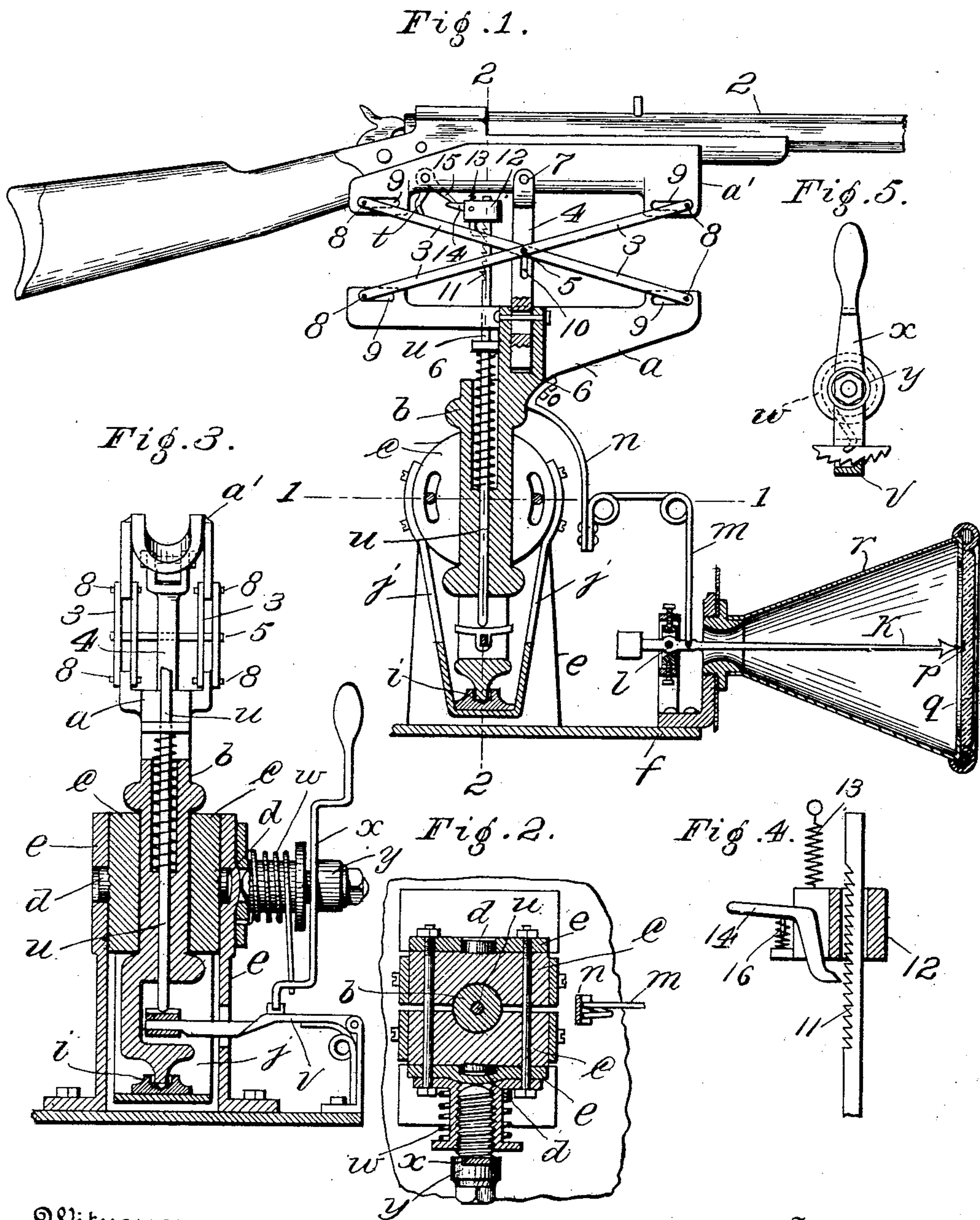
No. 751,591.

PATENTED FEB. 9, 1904.

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APPARATUS FOR TEACHING GUN PRACTICE.

APPLICATION FILED MAR. 18, 1903.

NO MODEL.



Witnesses
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APPARATUS FOR TEACHING GUN PRACTICE.

SPECIFICATION forming part of Letters Patent No. 751,591, dated February 9, 1904.

Application filed March 18, 1903. Serial No. 148,348. (No model.)

To all whom it may concern:

Be it known that I, JAMES WHITESIDE, a subject of the King of Great Britain, and a resident of New York city, county 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 means whereby the practical operations of target-shooting may, so far as the drill exercise is concerned, be carried on without the waste of ammunition and the danger incident thereto and also without the long range necessary to the common practice.

Such means now in use comprise, essentially, a universally-jointed gun-support for a real or false gun so contrived that the gun is while on the support subject to the manipulations of the practitioner, and the consequent deviations as in the common practice, with means for transmitting the deviations to a pointer so connected to the gun-support as to keep in such alinement relatively to the line of the gun-sight as to point to the same object and a clamping device which is automatically actuated simultaneously with and is set in operation by the pulling of the trigger and instantly locks the parts fast in the positions they occupy at the instant of firing against movements in any direction, so that the pointer shows with relation to the fixed center representing the bull's-eye of the target for after-observation the deviations due to the practice of the unskilled operator as they are shown on the ordinary target.

The improvement of this apparatus herein claimed comprises means whereby the operator may while sighting the gun take and hold the weight of the gun in his hands instead of allowing it to rest on the support, as heretofore, and thus approximate more nearly to the common practice, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a side elevation of the gun and gun-support with parts of the pointer-controlling mechanism in vertical section. Fig. 2 is a horizontal section on line 1 1 of Fig. 1.

Fig. 3 is a vertical section of essential parts of the supporting and clamping apparatus on line 2 2 of Fig. 1. Fig. 4 is a detail in vertical section in the same view as Fig. 1 and enlarged. Fig. 5 is a detail of the clamp setting and tripping apparatus.

As my invention is an improvement on apparatus already in use, I have shown in the drawings and will first describe generally so much of said apparatus as is necessary to illustrate the application of the said improvement and will then particularly describe the said improvement, which is mainly in what is called the "gun-support," part of which (herein designated by reference character *a*) corresponds, essentially, with the support heretofore used and is similarly mounted on a vertical standard *b*, placed between two clamping-disks *c*, carried by trunnions *d*, having suitable support, and said standard *b* has a step-bearing *i* at its lower end suspended by hangers *j*, attached to the disks *c*. Thus the gun-support can when the standard is not clamped turn on the vertical axis of the standard, and the clamping-disks can turn on the horizontal axis of the trunnions *d* for universal motion of the gun, such as it is subject to in the hands of the operator in ordinary practice. With the gun-support so mounted a pointer *k* is mounted in practical alinement with the line of the gun-sight on a universally-jointed pivot-support *l* and connected by a wire rod *m* with an arm *n*, attached to the standard *b* at *o* suitably for vibrating in unison with the vibrations of the gun and maintaining alinement with the gun.

In front of the extremity of the pointer a bull's-eye mark *p* is set, with which the pointer registers when the gun is in accurate alinement with the object aimed at, which may be any object set at a proper distance for sighting, and this mark is preferably on a transparent support *q*, through which the mark *p* and the extremity of the pointer can be seen clearly. It is preferably supported in a funnel-shaped guard *r* for the pointer.

If the gun is accurately aimed, at the instant of pulling the trigger the pointer will be accurately alined relatively to the mark *p*, and for any deviation of the gun from the true

line of the object aimed at the pointer will be correspondingly directed relatively to mark *p*, or approximately so.

To catch and hold the apparatus in the position occupied at the moment of pulling the trigger for observation as to whether the sighting was true or not, the clamp, previously set in the relaxed condition, is tripped by the action of the trigger *t* of the gun through the instrumentality of a tripping-rod *u* and a tripping-bar *v*, allowing a spring *w* to thrust a lever *x* on a screw *y* to close the clamp, and thus hold the parts for observation.

In the apparatus of this character now in use the gun 2 is placed directly on the part *a* of the support without means of operating the tripping-rod *u* by the trigger nor operating the pointer by the gun-support, except the gun be thus placed and supported, which prevents the operator from holding the weight of the gun in his hands, which is desirable, as before stated. I have therefore provided an additional separately-constructed part *a'* of the gun-support located directly over the part *a* and connected to the latter by the parallel-motion links 3 and the vertical yoke-staff 4, said links being crossed and pivoted together at 5 midway of their length and at the ends connected by rods 8 to the ends of the parts *a a'* of the gun-support, respectively, these connections being in slots 9, and thus adapted to slide to a limited extent for allowing part *a'* to rise and fall slightly in parallel relation to part *a* to allow the operator to lift it with the gun and bear the weight in his hands for more closely approximating the common practice. Two pairs of links 3 are used at opposite sides of the gun-support, respectively, and these pairs are connected by rods 8 and also by the rod of pivot 5, which passes through a slot 10 of the yoke-staff. The yoke-staff 4 stands in a socket 6 of part *a* of the support, and part *a'* of the support is pivoted at 7 in the prongs of the yoke, so that the staff rises when part *a'* is lifted.

When the gun is released, the rods 8 come to rest in the outer ends of slots 9, and staff 4 comes to rest in the bottom of socket 6, and the gun rests wholly on the support and may be manipulated thereon for sighting without bearing the weight in the hands, if preferred. Whether the weight of the gun is borne on the support or in the hands of the operator the deviations of the gun by the operator are transmitted through the parallel-motion links 3 to the part *a* of the support, and thereby communicated to the pointer *k*, same as in the above-described apparatus now in use.

To enable the trigger *t* to take effect on the tripping-rod *u* alike whether the gun be resting on the support or be lifted in the hands, said rod has a toothed rack portion 11 on the upper part, and a pawl-carrying block 12 is fitted to slide up and down along said rack,

said block being suspended from part *a'* of the gun-support by a coiled spring 13 for being so operated as the gun is lifted or let down, and the block 12 carries a pawl 14, one end of which is always in bearing-contact with the extremity of the trigger-arm 15 suitably for being thrust down when the trigger is pulled, and the pawl-bit ranges along the face of the ratchet-teeth 11, being normally prevented from engaging them by the spring 16, but instantly engaging them when the trigger is pulled and spring 16 is thereby overpowered. It will be seen that wherever the block 12 may rest along the rod *u* the pawl 14 will engage the said rod and actuate it when the trigger is pulled. The trigger may be pivoted on the part *a'* of the gun-support, as herein represented, or the gun-trigger may be adapted by suitable obvious modification to operate the pawl 14.

While the parallel-motion links 3 are simple and efficient means of effecting such connection of the movable part of the gun-support as will enable the weight of the gun to be taken in the hands of the operator while maintaining the proper connection of the parts for the proper deviations of the pointer relatively to the deviations of the gun, I do not limit myself to such means, for the essential feature of my invention is a gun-support adapted for manipulating the gun while resting on said support or with the weight supported in the hands of the operator, with any preferred means of effecting the deviations of the pointer in unison with the deviations of the gun.

What I claim as my invention is—

1. The combination with the universal-joint-supported gun-support which is subject to direct manipulations of the operator in firing the gun, of two linked or jointed parts of said support enabling the bearing of the weight of the gun in the hands of the operator while firing the gun and permitting one part to move toward, and from, the other in parallel arrangement but prevent relative angular movement, the 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, and a substitute bull's-eye mark in close proximity to the pointer.

2. In gun-practice apparatus of the character herein described, the combination of a gun-support, a pointer in alinement with the line of the gun-sight, a bull's-eye mark in alinement with the pointer, and means for transmitting the deviations of the line of the gun-sight to the pointer, said gun-support comprising two parts, one of which receives the gun and is movable in relation to the other, and means connecting said parts movably and in practical parallel relation to each other.

3. In gun-practice apparatus of the char-

acter herein described, the combination of a
gun-support, a pointer in alinement with the
line of the gun-sight, a bull's-eye mark in aline-
ment with the pointer and means for trans-
5 mitting the deviations of the line of the gun-
sight to the pointer, said gun-support com-
prising two parts, one of which receives the
gun and is movable in relation to the other and
means connecting said parts movably and in
10 practical parallel relation to each other, said
means comprising in part the crossed and piv-
oted links respectively connected to said parts
in slidable joints.

4. In gun-practice apparatus of the char-
15 acter herein described, the combination of the
gun-support, a pointer in alinement with the
line of the gun-sight, a bull's-eye mark in aline-
ment with the pointer, and means for trans-

mitting the deviations of the line of the gun-
sight to the pointer, said gun-support com- 20
prising two parts, one of which receives the
gun and is movable in relation to the other,
and means connecting said parts movably and
in practical parallel relation to each other, said
means comprising the crossed and pivoted 25
links respectively connected to said parts in
slidable joints, and the yoke-staff slidable in
the lower part of the support and pivoted to
the upper part thereof.

Signed at New York city this 28th day of 30
February, 1903.

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Witnesses:

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