

L. V. BENÉT & H. A. MERCIÉ.
SUPPORT FOR GUNS.
APPLICATION FILED MAR. 12, 1909.

959,291.

Patented May 24, 1910.

3 SHEETS—SHEET 1.

Fig. 1.

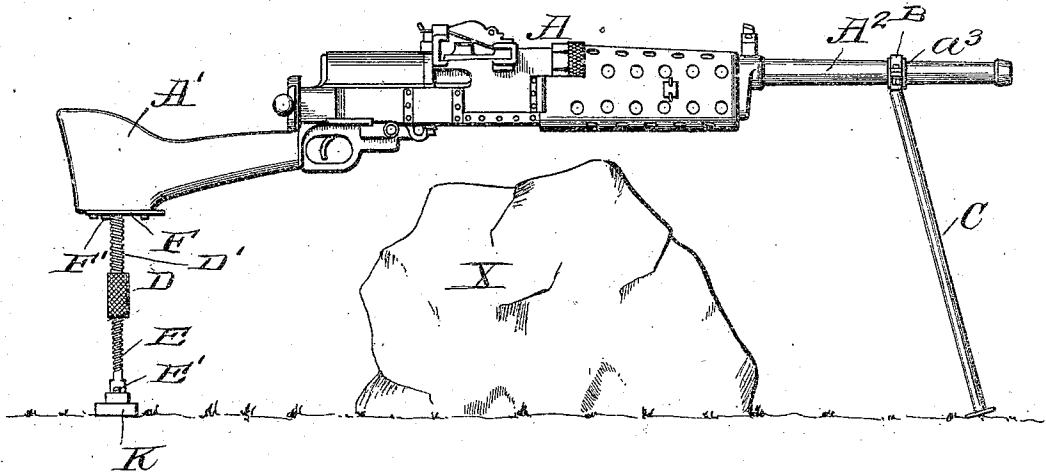
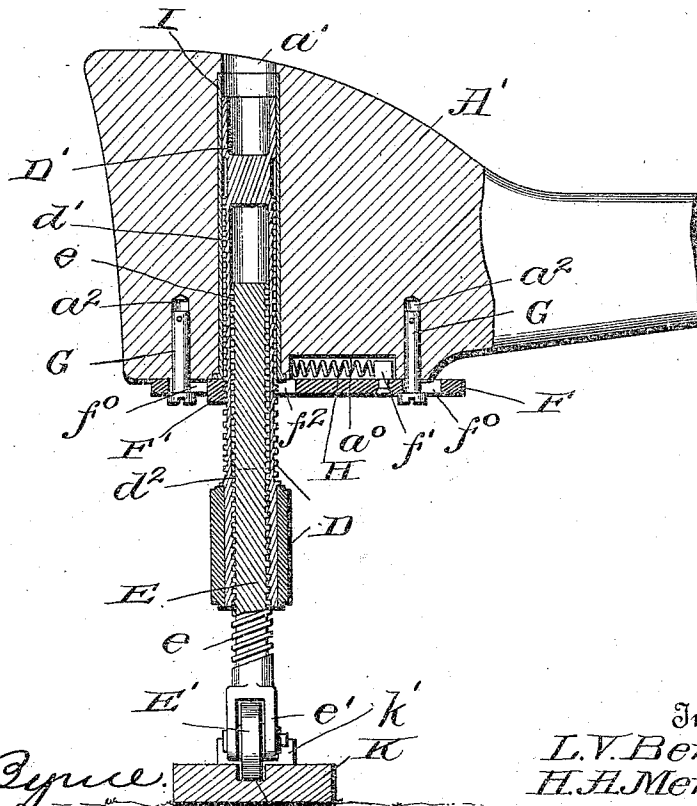


Fig. 2.



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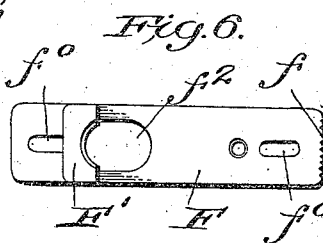
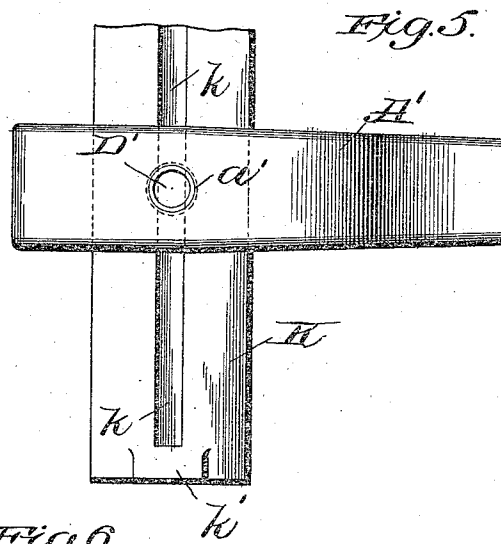
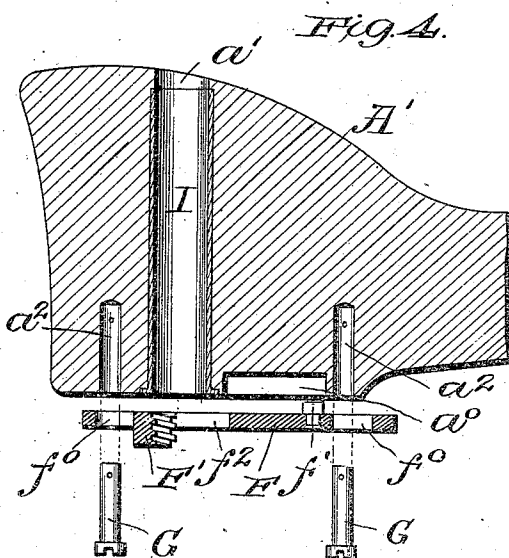
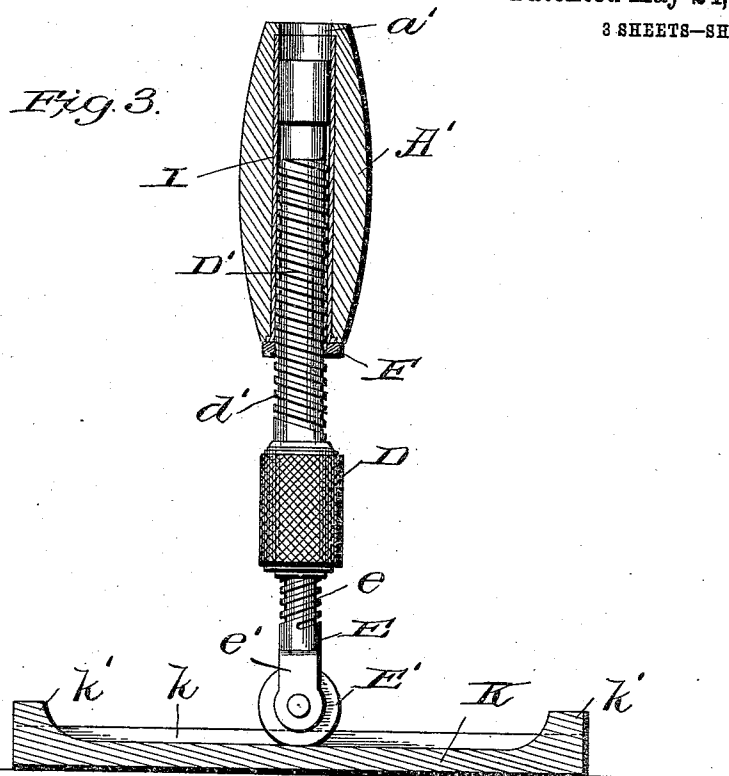
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 7.

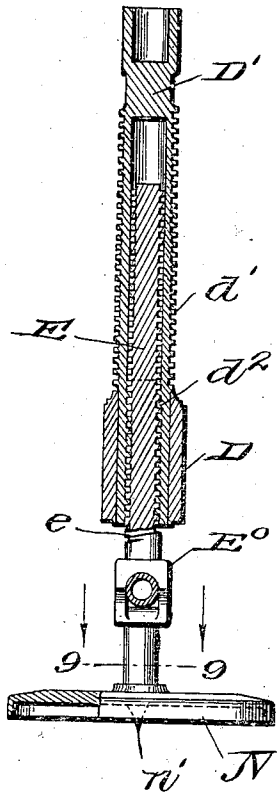


Fig. 8.

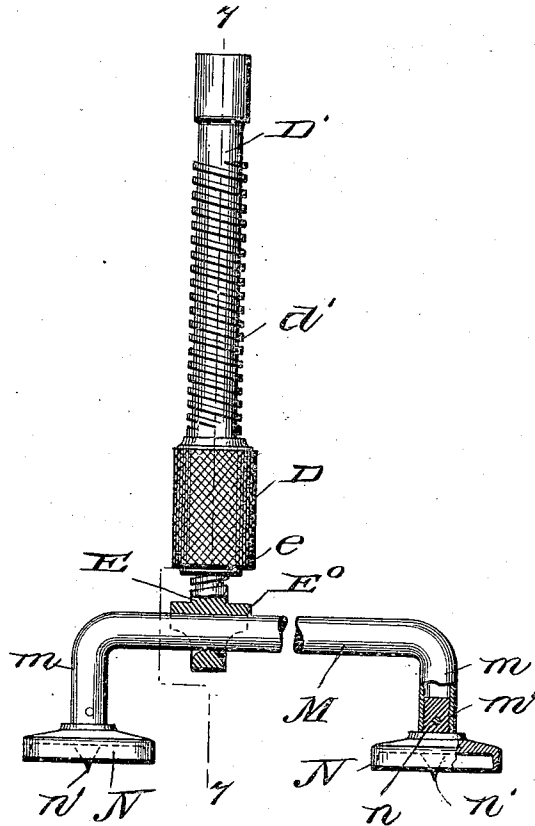
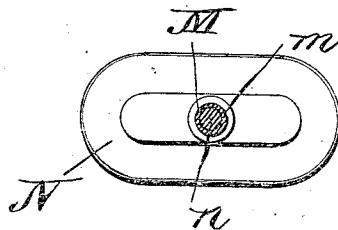


Fig. 9.



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UNITED STATES PATENT OFFICE.

LAURENCE V. BENÉT AND HENRI A. MERCIÉ, OF PARIS, FRANCE.

SUPPORT FOR GUNS.

959,291.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed March 12, 1909. Serial No. 483,006.

To all whom it may concern:

Be it known that we, LAURENCE V. BENÉT, a citizen of the United States, and HENRI A. MERCIÉ, a citizen of the French Republic, both residing at Paris, France, have invented certain new and useful Improvements in Supports for Guns; and we 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.

Our present invention relates to improvements in rear supports for guns designed to be fired from the shoulder, especially for automatic guns (Mitralleuses), for instance, guns of the type shown in our U. S. Patent No. 861939, granted July 30, 1907, entitled "Gas operated gun". Guns of this class are generally fired when the gun-pointer is in the lying down position, and with the stock of the piece held against his shoulder. The piece being comparatively heavy, it is difficult if not impossible to hold it for any length of time in a steady position.

The herein described invention is more especially intended to provide an adjustable support for the stock of the gun, by means of which a gun may be either rapidly or slowly raised or lowered, in elevation, or moved laterally, entrain, while at the same time being held steady against the shoulder of the gun-pointer, and fired with substantially as much precision as if it were on a rigid mount.

The apparatus is especially arranged so that it may be quickly attached to or removed from the gun; and so that the ordinary manipulation of the piece may not be in any way impaired when the detachable portions of the rear support are removed. Guns of this type are ordinarily provided with a pair of supporting legs swiveled to the barrel near the muzzle; the present invention relates especially to the provision of a third support for the breech end of the gun.

Reference is had to the accompanying drawings, in which the same letters refer to the same parts throughout the different views.

Figure 1 shows the gun in side elevation, in position for firing. Fig. 2 shows a central vertical section through the stock of the piece, and through the rear support, the parts being shown on a larger scale than in Fig. 1. Fig. 3 shows a cross section through

the stock, the support being shown in elevation. Fig. 4 shows a central vertical section through the stock, showing, ready for assembling, parts of the apparatus ordinarily carried thereby when the support is detached. Fig. 5 is a plan view of the stock and the shoe on which the rear support travels laterally. Fig. 6 is an inverted plan view of the sliding nut-plate carried by the hub. Figs. 7, 8, and 9 show a modified form of support, Fig. 7 being a section along the broken line 7-7 of the Fig. 8; Fig. 8, being an end view as seen from the rear of the stock; and Fig. 9 being a section along the line 9-9 of Fig. 7, and looking down.

A represents the gun proper, having the stock A' and the barrel A². This barrel is provided with a collar a³ carrying a band B, to which the front supporting legs C are hinged, as fully described in our Patent, No. 861939, aforesaid. The breech end of the gun is provided with a third supporting leg, as shown in Figs. 2 and 3. Referring to these figures, D represents a hand grip rigidly attached to the hollow stem D', which is free to slide in and out of the sleeve I, mounted in a recess a' in the stock A'. This stem D' is provided throughout the portion of its length with male screw threads d', and also with female screw threads d², which latter engage the threads e on the rod E. This rod terminates in a yoke e' carrying an anti-friction roller E', which travels in a groove k in the shoe K. The roller is prevented from traveling out of this groove by means of the end lugs k'.

In addition to the sleeve I, there is permanently attached to the stock a sliding plate F connected to the stock by the bolts G, fitted into holes a² bored into the stock, and passing through elongated slots f⁰ in the plate F. This plate carries the segmental nut F' to engage the male threads on the hollow stem D'. The nut is normally held in engagement with the said screw threads by means of the spring H, held in compression between a shoulder in the stock and the lug f' attached to the plate F, as shown in Fig. 2. This plate is also provided with an elongated hole f², to permit the passage therethrough of the stem D', and to allow the necessary longitudinal play to said plate. The front end of said plate is roughened, as shown at f in Fig. 6, so as to be more readily gripped by the finger of the gun-pointer.

To assemble the parts, screw the hollow stem D' over the rod E, then draw back the nut plate F. The stem then may readily be shoved through the hole f^2 into the sleeve I to the required distance, and, then, if the nut-plate be released, the spring H will bring the threads of the segmental nut F' into engagement with the male screw threads of the stem, and adjustment in elevation may be had by turning the hand grip D to the right or left, according to which direction may be required, to raise or lower the breech. Where it is desired to change the elevation quickly, the nut plate may be sprung back clear of the threads of the stem, and the stock may be raised or lowered, relative to the stem, to approximately the desired elevation. To remove the stem it will be simply necessary to draw back the nut plate and withdraw the stem from the sleeve.

It is preferable to have the male threads on the rod E, of coarse pitch and also of reverse pitch to the male threads on the hollow stem D, the rod and hollow stem forming a compound screw, the two members of which may be rapidly assembled or disassembled, quick longitudinal motion of the parts relative to each other being had by this form of compound screw.

A shoe such as K should preferably be provided for the roller E' to roll on; but any suitable substitute may be accepted, such as a tin dinner plate, a skillet, a box top, or the like, and in many instances, such as in firing from a floor or deck or on hard ground, the shoe may be omitted without materially impairing the efficiency of the device. It will be obvious that a slower but nicer adjustment may be had if the inner screw is left free to revolve, and the elevation is adjusted by turning the outer screw D' in engagement with the nut, the compound screw then acting as a single screw.

In the modification shown in Figs. 7 to 9 the general construction of the hollow stem and the parts carried by the stock, not shown, are the same as already described with reference to Figs. 1 to 6; but instead of the shoe K shown in Fig. 1, 2, 3, and 5, a heel support M is provided, preferably in the form of a straight, hollow tube with downwardly turned ends m , and with female screw threads m' to receive the stem n of the shoe N, which is preferably elliptical and cup shaped, as shown. These shoes are also preferably provided with a holding point n' . The screw rod E is provided with an eye E^o, which slides over the tube M as shown in Fig. 8.

To use the breech supporting device, having first assembled the parts as hereinbefore described, and the gunner having assumed the position for firing lying down, with the trigger guard of the gun in his right hand,

holds the stock A' firmly against his shoulder, with his left hand he can grasp the grip D, and can turn same in one direction or the other, either to elevate or depress the piece. The movement in elevation is rapid owing to the quick pitch of the threads of the compound screw. It is also possible, if desired, to withdraw the roller E' from the groove k and turn the inner screw E by hand, thus securing the required change in elevation. Or to lengthen or shorten the screw quickly, disengage the nut and rotate the outer screw D' rapidly, and then allow the nut to snap back into engagement when the gun is at approximately the desired elevation. Changes entrain are effected by simply swinging the stock to the right or left, as may be required.

In firing at high elevation, when the stock is so near the ground as to render a firm pressure against the shoulder impracticable, the then greatly shortened rear support will still maintain the line of fire at the fixed elevation.

It will be evident that the eye E^o may be slid freely along the tube M to move the gun laterally or entrain. It will be noted that with both forms of the device the sleeve I, the plate F, bolts G, and the spring H are permanently attached to the stock, and that these parts will not interfere with the manipulation of the gun when the stem D', and the parts carried thereby, are removed from the gun. It will also be noted that the operative parts are simple and strong in construction and are not liable to get out of order, and that the major portion of the apparatus may be shifted from one gun to another, if desired.

In Fig. 1 the gun-pointer is supposed to be taking advantage of the presence of a convenient rock X to fire from behind it.

It will be obvious that various modifications may be made in this apparatus without departing from the spirit of the invention.

Having thus described our invention, what we claim and desire to secure by Letters Patent of the United States is:

1. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

2. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, and a rear support comprising a compound screw detachably connected to the stock of

the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, and means for supporting the lower end of said compound screw clear of the ground while permitting freedom of lateral movement, and also while holding it against turning with the other member, substantially as described.

3. The combination with a gun of the character described, of a pair of supporting legs hinged to the gun near the muzzle, a rear support comprising a compound screw detachably connected to the stock of the gun, and a shoe placed on the ground and engaging the lower end of said compound screw, and holding same against turning while permitting lateral movement to said screw, with a segmental nut carried by the gun stock and normally engaging the upper member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

4. The combination with a gun of the character described, of means for supporting the muzzle end of the gun, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, substantially as described.

5. The combination with a gun of the character described, of means for supporting the muzzle end of the gun, and a rear support comprising a compound screw detachably connected to the stock of the gun, with a segmental nut carried by the gun stock and normally engaging one member of said compound screw, with means for withdrawing said nut from said engagement, when desired, and means for supporting the lower end of said compound screw clear of the ground while permitting freedom of lateral movement, and also while holding it against turning with the other member, substantially as described.

6. A rear support for guns of the character described, comprising a sleeve mounted in the wooden stock of the gun, a supporting piece carried by the ground, a com-

pound screw having its lower member supported by and free to move laterally on said supporting piece but held against turning thereon, and having its upper member project into said sleeve in the stock, means for turning one member of said compound screw, a plate attached to and adapted to slide beneath the stock, a segmental nut carried by said plate and adapted to engage the upper member of said compound screw, and a spring engaging said plate and normally holding said nut in engagement, substantially as described.

7. A rear support for guns of the character described, comprising the combination with a recessed stock, of a supporting piece carried by the ground, a compound screw having its outer hollow member provided with male and female screw threads on its outer and inner surfaces, respectively, and having its lower and inner member supported by and free to move laterally on said supporting piece, but held against turning thereon, the said upper and outer member being adapted to project into said recess in the stock of the gun, means for turning one member of said compound screw, a perforated plate attached to and adapted to slide beneath the stock, a segmental nut carried by said plate and adapted to engage the upper member of said compound screw, and a spring engaging said plate and normally holding said nut in engagement, substantially as described.

8. A rear support for guns of the character described, comprising a sleeve mounted in the wooden stock of the gun, a compound screw having its upper member project into said sleeve in the stock, means for turning one member of said compound screw, a plate attached to and adapted to slide beneath the stock, a segmental nut carried by said plate and adapted to engage the upper member of said compound screw, and a spring engaging said plate and normally holding said nut in engagement, substantially as described.

In testimony whereof, we affix our signatures, in presence of two witnesses.

LAURENCE V. BENÉT.
HENRI A. MERCIÉ.

Witnesses:

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C. KURER.