L. L. RICHARD.

ALTISCOPE FIREARM.

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1,174,282. Patented Mar. 7, 1916.

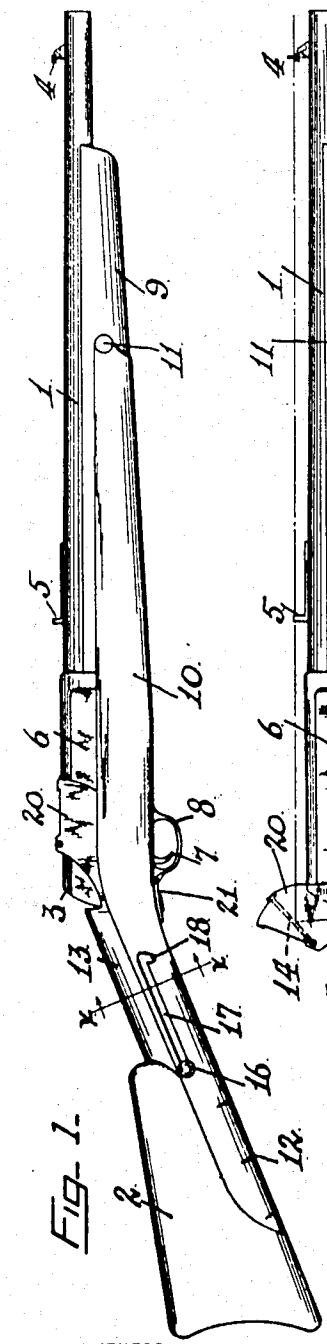


Fig. 1.

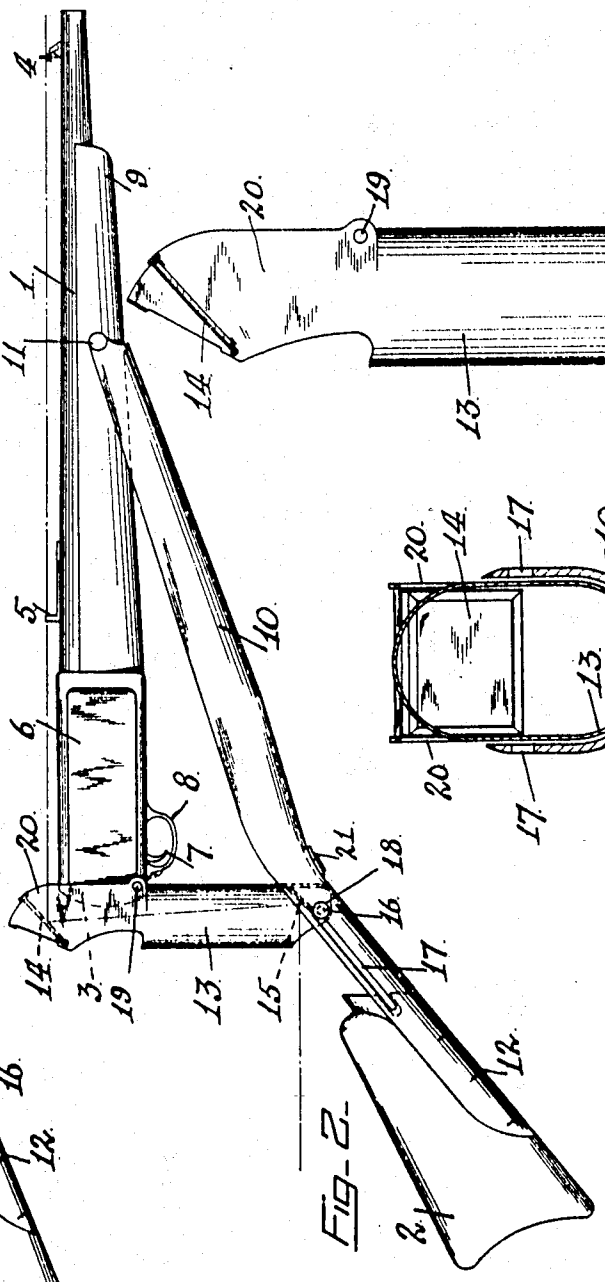


Fig. 2.

Fig. 3.

Fig. 4.

WITNESS

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ALTISCOPE-FIREARM.

1,174,282. Specification of Letters Patent. Patented Mar. 7, 1916.

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To all whom it may concern:

Be it known that I, LEROY L. RICHARD, a citizen of the United States, residing at Coalinga, in the county of Fresno and State of California, have invented certain new and useful Improvements in Altiscopic Firearms, of which the following is a specification.

My invention relates in general to firearms, and more particularly to smallarms.

The object of my invention is to provide a smallarm adapted for use in trenches, in that it is capable of being laid over the rim of the trench, while its user, by means of an altiscope with which the arm is fitted, is able to aim without exposing himself.

My invention consists in the novel altiscopic firearm which, in its preferred form, I shall now fully describe by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my firearm showing it in its normal condition to be used as an ordinary rifle. Fig. 2 is a side elevation of the same showing it adjusted for use as an altiscopic rifle. Fig. 3 is a section, enlarged, on the line *x*—*x* of Fig. 1. Fig. 4 is a vertical section, enlarged, of the altiscope member.

As my invention is applicable to various makes and styles of smallarms, and has no concern with the details of their usual operative parts and functions, it will be necessary to illustrate these parts and to refer to them in a general way only. Accordingly, 1 indicates the barrel portion of the rifle, and 2 the stock portion. Under the term "barrel portion" I herein include the charging and firing mechanisms and all the parts which are more intimately associated with the barrel, as, for example, the breech region 3, the front sight 4, the rear sight 5, the magazine region 6, the trigger 7, and guard 8, and also that forward part 9, sometimes called the "forearm", which underlies the barrel, and is usually the front portion of the stock. Under the term "stock portion", I include only that main body of the stock which is applied to the shoulder of the user. These parts represent the usual members of all forms of rifles. The only distinction to be here made is that for the purposes of my invention the front part 9, which is usually a part of the stock, is included in the barrel portion, and the rear end of this barrel portion is separated by a space from the forward end of the stock portion 2. These two portions are united by a pivotal connection of a character which enables them to relatively move from a normal position in which they occupy the relation of the parts of an ordinary rifle, as seen in Fig. 1, to a position in which the barrel occupies a position sufficiently removed from the head of the user to avoid his exposure to danger while holding the stock 2 to his shoulder in the usual position for aiming and firing. This relative movement may be in any direction, as, for example, horizontally, for aiming around a corner or angle, or vertically for aiming over an embankment or wall; and in this general connection the means by which the aiming is rendered possible may be truly periscopic in character, but for practical purposes, and in the form I have herein illustrated the invention, the movement is vertical, as shown in Fig. 2. For this reason I use the term altiscopic as defining more particularly the character of the operation as far as direction is concerned. The pivotal connection here shown is in the form of an arm 10, which practically forms an extension of the stock 2. This arm is connected at its forward end to the barrel portion by pivots on each side, one pivot 11 being here shown, and it is connected fixedly at its rear end to the stock portion, as shown by the screws 12. The arm 10 bridges the space between the barrel and stock portions and is concave in cross section, as seen in Fig. 3, to lie snugly to said portions. The effect of this arm connection is such that when the parts lie folded together, they are in the positions of a normal rifle, as in Fig. 1. But when they are moved relatively about the pivots at 11, the rear end of the barrel portion will rise above the forward end of the stock portion, as seen in Fig. 2.

The movement of the barrel, relatively to the stock, is the occasion of the unfolding or extension to functional position of an altiscope member, and its return to a folded position out of the way when not in use. This member comprises a tube 13, having a mirror 14 in its forward or upper end and a mirror 15 in its rear or lower end. The lower or rear end of the altiscope tube is slidingly pivoted by the pins 16 in side slots 17 of the arm 10, the forward ends of the slots having recesses 18. The upper or forward end of the tube 13 is pivoted at 19 to the rear end of the barrel portion and said upper or forward end, which is

designated by 20, fits over and embraces the rear end of the barrel. The upper mirror 14 has an exposure forward through the upper end 20 of the tube, in the line of the gun sights 4 and 5, while the lower mirror 15 is exposed rearwardly to the line of sight of the user, as shown by the dotted lines in Fig. 2. The two mirrors are, of course, set to reflect from one to the other through the tube.

When the parts are in the position of a normal rifle, as seen in Fig. 1, the altiscope tube lies down in a folded position between the barrel and stock, being neatly nested, as shown in Fig. 3, in the arm 10, and with its forward end 20 lying over the rear end of the barrel. By grasping the forward end of said tube and exerting a lifting pressure, the rear end of the barrel is elevated from the stock. By this movement the rear end of the tube moves forward until said tube is vertical, and its pivots 16 drop into and lock in the terminal recesses 18 of the slots 17. This is the position shown in Fig. 2, and the rifle may then be used to aim and fire over the bank of a trench, while the head of the user is low enough to be fully protected.

At 21 is shown a small latch under the arm 10, said latch being adapted to lock into a keeper on the trigger guard 8, when said guard, as in Fig. 1, projects through an opening in the arm 10. This lock insures the stability of the parts in normal position.

I claim:—

1. A firearm comprising a barrel; a stock; a pivotal connection adapting said barrel and stock for relative movement; and an associated altiscope member unfolding to functional position upon the relative movement of said barrel and stock.

2. A firearm comprising a barrel; a stock; a pivotal connection adapting said barrel and stock for relative movement; and an altiscope member associated with said barrel and stock and arranged to be automatically unfolded to functional position by their relative movement.

3. A firearm comprising a barrel; a stock; an arm of said stock extending between and pivotally connecting the barrel and stock, adapting their adjacent ends for separation; and an altiscope member lying between said ends and arranged for unfolding to functional position upon the separation of said ends.

4. A firearm comprising a barrel; a stock, the forward end of which is spaced from the rear end of the barrel; an arm of said stock bridging said space and pivotally connecting the barrel and stock; and an altiscope member normally lying in the space between the barrel and stock, said altiscope member being pivotally connected to the arm and to the barrel portion for unfolding to functional position by the separation of the adjacent ends of the barrel and stock.

5. A firearm comprising a barrel; a stock, the forward end of which is spaced from the rear end of the barrel; an arm of said stock bridging said space and pivotally connecting the barrel and stock; an altiscope member normally lying in the space between the barrel and stock; a stationary pivotal connection between the forward end of said altiscope member and the rear end of the barrel; and a sliding pivotal connection between its rear end and the arm of the stock, said connections adapting the altiscope member for unfolding to functional position upon the separation of the adjacent ends of the barrel and stock.

6. A firearm comprising a barrel; a stock, the forward end of which is spaced from the rear end of the barrel; an arm of said stock bridging said space and pivotally connecting the barrel and stock; an altiscope member normally lying in the space between the barrel and stock; a stationary pivotal connection between the forward end of said altiscope member and the rear end of the barrel; and pivot pins in the rear end of the altiscope member fitting and sliding in slots in the arm of the stock and locking in recesses in the forward ends thereof, whereby said altiscope member is adapted for unfolding to functional position upon the separation of the adjacent ends of the barrel and stock.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEROY L. RICHARD.

Witnesses:

WM. F. BOOTH,

S. CONSTINE.