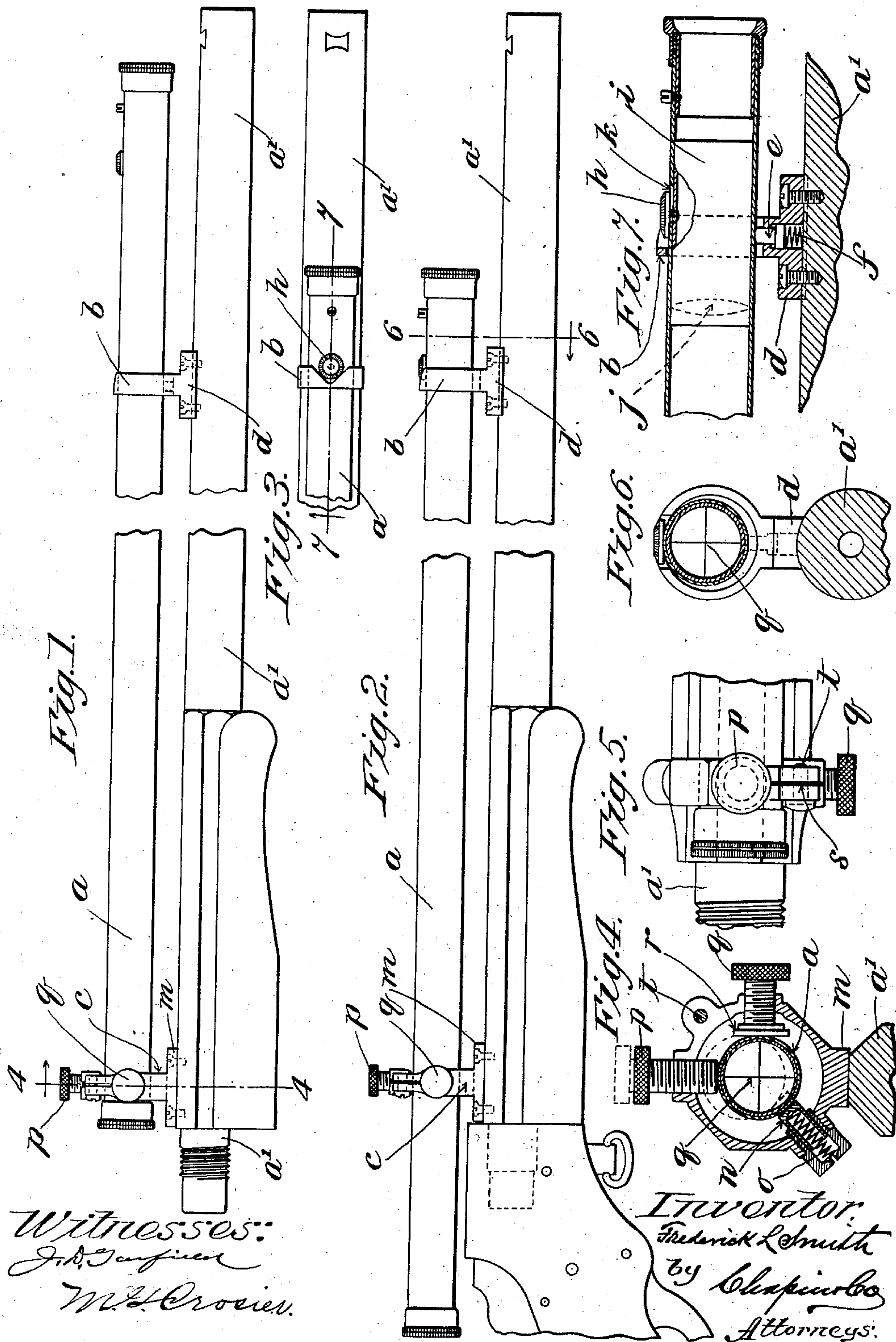


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F. L. SMITH.
RIFLE TELESCOPE.
APPLICATION FILED AUG. 28, 1903.



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UNITED STATES PATENT OFFICE.

FREDERICK L. SMITH, OF CHICOPEE FALLS, MASSACHUSETTS.

RIFLE-TELESCOPE.

No. 812,376.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDERICK L. SMITH, a citizen of the United States, residing at Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Rifle-Telescopes, of which the following is a specification.

This invention relates to telescope-mountings for firearms, the object of the invention being to provide a telescope adapted for use on "take-down" guns, so called, whereby when the gun is put together the telescope may be moved into proper position for use and when the barrel is removed from the stock the position of the telescope may be shifted to adapt it to fit the gun-case in the place therein provided for the barrel or to be packed for transportation in any space which as to length will receive the barrel.

Having these ends in view, the invention consists in mounting the telescope solely upon the barrel in fixtures or mountings which will permit it to slide longitudinally and at the same time permit the vertical and horizontal adjustment of one end thereof to sight the gun.

In the drawings forming part of this application, Figure 1 is a side elevation of a rifle-barrel dismounted from its stock and having a telescope mounted thereon according to this invention. Fig. 2 is a similar view to Fig. 1, showing a rifle-barrel mounted in the stock and showing the telescope in another position. Fig. 3 is a top plan view of a portion of the rifle-barrel and the telescope shown in Fig. 2. Fig. 4 is a sectional elevation on line 4 4, Fig. 1. Fig. 5 is a top plan view of the telescope-mounting located at the breech end of the barrel. Fig. 6 is a sectional elevation on line 6 6, Fig. 2. Fig. 7 is a longitudinal sectional elevation on line 7 7, Fig. 3, showing the construction of the muzzle end of the telescope and its front mounting. Figs. 4, 5, 6, and 7 are on a somewhat larger scale than the other figures.

In the use of telescopic sights in rifle-shooting it is necessary in order to get a clear view of the object aimed at that the eye be in close proximity to the eyepiece of the telescope. Heretofore telescopes have been secured to the rifle in mountings secured, respectively, to the receiver at one end and on the barrel, near the muzzle, at the other end. This is not only a serious inconvenience, when it is desired to transport the gun in its case, for it necessitates dismounting the telescope if the gun is of the take-down type, which opera-

tion necessarily disturbs the adjustment of the telescope and necessitates resighting the rifle when the parts are again assembled; but, furthermore, the mounting of one end of these telescopes on the receiver or stock and the other end on the barrel of the arm renders it much more difficult to maintain the accurate adjustment thereof than if the telescope be mounted entirely upon the barrel, as in this invention. To overcome these objections, I construct a telescope *a*, adapted to be mounted entirely upon the barrel *a'* in suitable fixtures or mountings, of which *b* represents that one located near the muzzle of the rifle, and *c* that one located near the breech thereof. While in the drawings these mountings are shown as secured to the top of the barrel, they may, if desired, be secured on one side or the other of the barrel, it being the preference of some to have the telescope mounted at one side of the barrel in order that the ordinary sights of the latter need not be removed. This is a matter, however, which does not concern the invention, it being merely a question as to the location of the parts which constitute the invention.

The front mounting *b* comprises an annular member of larger diameter internally than the exterior diameter of the telescope, which member is mounted upon a block *d*, which is screwed or otherwise secured to the barrel. A plunger *e* is located in the block *d*, its upper end passing through a hole and into the annular member of the mounting, a suitable spring *f* forcing the plunger radially toward the center of the mounting to the end that the forward end of the telescope when located in said mounting will by means of said plunger be pressed normally against the upper side of said annular member, whereby the axis of the telescope in the front mounting may be located at a fixed distance from the axis of the barrel. This construction will permit the rear end of the telescope to be moved in a horizontal and a vertical plane in a manner to be hereinafter described to properly sight the rifle, and it will also permit the telescope to slide longitudinally in said mounting when for purposes of transportation it is moved forward to the position shown in Fig. 1.

As shown in Fig. 6, the telescope is provided with the usual cross-hairs *g*, whose intersection is located in the axis of the telescope, and which hairs to insure accuracy in aiming should be located, respectively, in

horizontal and vertical planes, and to insure this fixedness of position the telescope must be prevented from rotating axially when it is drawn rearwardly to the position shown in Fig. 2, and to that end the upper forward edge of the mounting *b* is notched, as shown in Fig. 3, and a pin or screw, as *h*, secured to the telescope in position of alinement with one of the cross-hairs *g* and is adapted to engage the converging sides of the notch cut in the mounting, and thus center the telescope and locate said cross-hairs in proper position.

In the construction shown herein the screw *h* is used to constitute a limiting-stop for the telescope, and this screw is the one by which the tubular slide *i* is secured in the tube of the telescope, this tube carrying the posterior objective-lens *j*. (Shown only in dotted lines in Fig. 7.) The movement of this tube *i* toward and from the rear end of the telescope effects the focusing of the latter, the body of the telescope having a longitudinal slot *k* therein to permit the adjusting movement of said tube *i*, which is effected by loosening the screw *h* and moving the tube forward or back until the proper focus is reached, then tightening up the screw. Obviously any other projection located on the telescope in a position to engage the notch in the mounting *b* may be used instead of the adjusting-screw *h*. The rear mounting *c* also comprises an annular member mounted upon the block *m*, properly secured to the barrel, and said annular member is also provided with a plunger *n*, which by a spring *o* is normally forced toward the center of the mounting. This spring-pressed plunger, however, on the rear mounting is located at an angle of forty-five degrees one side or the other below the center thereof, and two adjusting-screws are located in the mounting, one vertically and the other horizontally, the horizontal screw being on that side of the mounting opposite to that on which the spring-pressed plunger *o* is located, thus providing the rear end of the telescope with a three-point bearing, the plunger *n* being one point, which yieldingly presses the tube of the telescope equally against the other two points of the bearing. The vertically-located adjusting-screw is indicated by *p* and the horizontal screw by *q*.

As the vertical adjustment of the rear end of the telescope must be greater than the horizontal adjustment thereof, the inner end of the horizontal screw *q* is provided with a head *r* larger than the screw, to the end that this head may afford a suitable bearing for the telescope, where the pivotal adjustment

thereof might otherwise carry it so far as to permit it to slide off of the end of the screw. To provide a convenient locking for the adjusting-screws *p* and *q*, the rear mounting is slotted, as at *s*, a screw *t* being located transversely of the slot, whereby after the adjusting-screw has been "set" the screw *t* may be turned up to lock them in their adjusted position.

From the foregoing description it is seen that the telescope may be moved in its mountings to a position shown in Fig. 1, which will permit it to be packed in a space no longer than that required for the barrel and when the latter is mounted on its stock drawn back into a position which permits the application of the eye close to the rear end of the telescope and that this sliding movement may be effected without disarrangement of the adjustments of the telescope, and therefore a properly-sighted barrel may be dismounted from the stock at will and mounted again and be ready for use without resighting. This is of great utility in this class of rifles, as the sighting of a telescope is a delicate operation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a barrel of a take-down rifle, of a telescope mounted thereon provided with suitable horizontal and vertically-disposed cross-hairs, suitable mounts for the telescope located near each end of the barrel and in which the telescope is longitudinally slidable, a stop on the telescope to engage one of said mountings to prevent the rotation of the telescope when in an adjusted position, and to locate said cross-hairs in their proper position.

2. The combination with a barrel of a take-down rifle, of a telescope mounted thereon provided with suitable horizontal and vertically-disposed cross-hairs, suitable mounts for the telescope located near each end of the barrel and in which the telescope is longitudinally slidable, a stop on the barrel to engage one of said mountings to prevent the rotation of the telescope when in an adjusted position and to locate said cross-hairs in their proper position, together with devices to effect the vertical and horizontal adjustment of the telescope.

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