TELESCOPING RIFLE SUPPORT

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ABSTRACT

A telescoping rifle support for providing stable triangular support for aiming a rifle. The telescoping rifle support includes a plurality of telescoping tubular segments and an arm support. A bottom tubular segment has a flange extending from a first end of the bottom segment to a second end of the segment. The flange creates a loop for receiving a belt which attaches the rifle support to the shooter. The bottom segment further includes a means for cooperating with an upper tubular segment for locking the rifle support into either a contracted or extended position. When the rifle support is locked in an extended position, the shooter grasps the arm support in one hand to form a triangular support configuration. The triangular support configuration consists of the shooter's extended arm, the shooter's torso, and the telescoping rifle support.
FIG. 1
FIG. 3
TELESCOPING RIFLE SUPPORT

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The invention relates generally to a new and improved telescoping rifle support. In particular, the invention relates to a support for the barrel of a rifle when shooting at a target.

[0003] 2. Description of the Art

[0004] Stability at the time of firing a rifle is critical to the bullet hitting its target. When holding a rifle up and taking care to aim, the shooter’s arm may waiver under the weight of the rifle. Even a slight amount of movement or flexure can materially affect shooting accuracy. As a result, a perfectly aligned shot may be lost due to fatigue in the shooter’s arm. In the prior art, it is well known that fitting a bipod with a support part and legs can be used to steady a rifle. Support bipods have relatively short legs, which require the shooter to lie on his or her stomach when setting up and firing off his or her shot. Such bipods have been provided for both military weapons and for hunting and sport weapons. U.S. Pat. No. 6,267,335 to James Barrett entitled “Hunting Armrest” addresses the need for providing stability to the rifle while the shooter is firing from a standing position.

[0005] The ’335 Patent describes a hunter’s armrest having a means for attaching the armrest to the hunter; a base member which telescopically receives an upper member and an armrest member on a distal end of the upper member. A set screw communicates with the hollow interior of the base rod such that the set screw bears against the first upper rod when the first upper rod is received therein to lock a first upper lock in an appropriate position relative to the base rod. The locking mechanism described in ’335 Patent is not practical in the field. In order to manipulate the locking mechanism the shooter would have to hold the armrest with one hand and manipulate the setscrew with the other. This precludes the shooter from holding his or her rifle while adjusting the length of the arm support.

BRIEF SUMMARY OF THE INVENTION

[0006] The present invention relates to a support member for a rifle to be used when the shooter is in a standing or upright position. The support member formed from plural telescoping tubular segments gives additional support to the fore end of the stock of the rifle when the shooter is aiming the rifle, and thus, ensures a more steady, targeted shot. More importantly, the support member can be easily extended and contracted by simply twisting the interlocking tubular segments. The rifle support member comprises a plurality of rigid telescoping tubular segments extending outward to a distal end. The proximal tubular segment has a belt loop for securing it to the shooter’s pants belt and the distal most segment includes a hand grip member on its distal end. When collapsed, the rifle support member points upward from the belt approximately 5 to 6 inches but is extendable to a length of about 28”. The shooter simultaneously grips the rifle stock at its fore end and the hand grip on the distal end of the support member such that the telescoping shaft provides additional support while the shooter lines up his or her shot. When the shooter wishes to contract the armrest, he or she, using only one hand, can unlock the plural segments from one another and collapse it by twisting the tubular segment to release the locking mechanism.

DETAILED DESCRIPTION OF THE DRAWINGS

[0007] The foregoing features, object and advantages of the invention will become apparent to those skilled in the art from the following detailed description of the preferred embodiment, especially when considered in conjunction with the accompanying drawings in which like numerals in the several views refer to the corresponding parts.

[0008] FIG. 1 is a perspective view of a first embodiment of a telescoping rifle support according to the present invention;

[0009] FIG. 2 is a perspective view of the hunter’s rifle support device illustrated as in FIG. 1 in operation; and

[0010] FIG. 3 is a perspective view of an alternative embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0011] A telescoping rifle support 10, according to the present invention is illustrated by the figures. A first embodiment is shown in FIG. 1. The telescoping rifle support 10 of the present invention includes a bottom tubular segment 12 and a top tubular segment 14. The rifle support 10 may be made out of steel or other appropriate material giving appropriate strength to the rifle support 10. The bottom tubular segment 12 has a first end 16 and a second end 18. A rigid strap 20 is attached to the bottom tubular segment and extends from the first end 16 to the second end 18 of the bottom tubular segment 12 to create a belt loop 22. The belt loop 22 is a means for attaching the rifle support 10 to the belt of the shooter. Alternatively, a strap made of suitable material can be faced through the loop and tied to the waist of the shooter so as to attach the rifle support 10 to the shooter.

[0012] The bottom tubular segment 12 has a first notch 24 disposed approximate to the first end 16. A second notch 26 is disposed near the second end 18 of the bottom tubular segment 12. Parallel to the first notch 24 and second notch 26 is a guide slit 28, which runs a predetermined distance along the longitudinal axis of the bottom tubular segment 12.

[0013] The top tubular segment 14 has a first end 30 and a second end 32. A detent 34 is disposed on a peripheral edge 36 of the first end 30. Because the tubular segments 12 and 14 are telescoping when the detent 34 passes through the first notch 24 of the bottom tubular segment 12, the rifle support is locked in a contracted position and the proximal end of the segment 14 does not extend out from the end 16 of the segment 12. The shooter can then simply let the rifle support 10 extend from his or her waist by the loop 22. When the shooter is ready to deploy the rifle support 10 he or she twists the top tubular segment 14 so that the detent 34 is removed from the first notch 24. The shooter then pulls the top tubular segment 14 upward until the detent 34 of the top tubular segment passes through the second notch 26 of the bottom tubular segment 12. When the detent 34 passes through the second notch 26 the rifle support 10 is locked in an extended position.

[0014] The guiding tab 38 is disposed on the peripheral edge 36 of the first end 30 of the top tubular segment 14.
adjacent to the detent 34. The guiding tab 38 is received by guide slit 28. The guide slit acts as a limiter to the horizontal movement of the guiding tab 38. Because guiding tab 38 is attached to the top tubular segment 14 the top tubular segment can only twist so far. The guiding tab cooperates with the guiding slit 28 to control the alignment of the detent 34 with the first notch 24 and the second notch 26 of the bottom tubular segment 12 such that when the top tubular segment 14 is pulled on the detent 34 will pass through the second notch 26. Disposed on the second end 32 of the top tubular segment 14 is a hand grip 40. Hand grip 40 is preferably diamond-shaped, having a flat top surface 41 of an area greater than that of the end of the tube 14 and with four planar, tapered and sloping sides as at 43.

At operation, the telescoping rifle support 10, illustrated in FIG. 1, is attached to the shooter by a strap or belt extending around the shooter's waist as shown in FIG. 2a, and as passing through the belt loop 20. The top tubular segment 14 is telescopically received in the bottom tubular segment 12 and is secured in the locked position when detent 34 passes through second notch 26. The hand grip 40 provides a grippable member for the shooter. As shown in FIG. 2, the shooter, using a rifle, can extend his arm and grip the armrest member 40. This forms a triangular support configuration consisting of the user's extended arm, the user's torso and the telescoping rifle support 10 as shown in FIG. 2. The shooter's weapon is steadied on the upper portion of the user's hand and prevented from lateral movement relative to the rifle support 10 by the thumb and forefinger of the user that wrap about the stock at the rear end thereof while the remaining three fingers grasp the hand grip 40. With a strap encircling the user's waist and passing through loop 22 the bottom tubular segment 14 is attached to the user so that the user can extend his arm into a comfortable shooting position. In the collapsed condition, the rifle support is located such that the hunter's belt is located proximate the end 18 of the segment 12, but when extended, the rifle support is pulled and that the belt is now thought close to end 16.

FIG. 3 illustrates a second embodiment of the rifle support 10. In this embodiment there are a plurality of identical intermediate tubular segments 42 which are inserted between the bottom tubular segment 12 and the top tubular segment 14. Each intermediate tubular segment 42 has a first end 44 and a second end 46. A detent 48 is disposed on the peripheral edge 50 of the first end 44 of the intermediate tubular segment 42. Likewise, a guide tab 52 is disposed adjacent to the detent 50 of the intermediate tubular segment 42. The intermediate tubular segment 42 has its own guide slit 54 and notch 56. The notch 56 is disposed at the second end 46 of the intermediate tubular segment 42 parallel to the guide slit 54. The intermediate tubular segment 42 is placed in a contracted or extended position as described above. By providing multiple telescoping segments, the overall length of the rifle support when collapsed is sufficiently short so as not to interfere with the hunter's activities, yet extendable to the degree necessary to function as a gun support.

This invention has been described herein in considerable detail and in order to comply with the patent statutes and to provide those skilled in the art with the information needed to apply the novel principles and to construct and use such specialized components as are required. However, it is understood that the invention can be carried out by specifically different equipment and devices, in that various modifications, both as to equipment details and operating procedures, can be accomplished without departing from the scope of the invention itself.

What is claimed is:

1. A telescoping rifle support for hunters comprising:
   (1) a bottom tubular segment having a first and second end and a lumen extending therebetween, wherein a generally rigid strap is affixed to the bottom tubular segment proximate the first end and second end to form a loop adapted to receive a hunter's belt therethrough, said bottom tubular segment further including a first notch proximate the first end and a second notch proximate the second end, and further including an elongate guide slit which runs parallel to a straight line extending between the first and second notches;
   (2) a top tubular segment having a first and second end, wherein

   a) a detent projects from a peripheral edge of the first end of the top tubular segment, such that when the top tubular segment is inserted into the lumen of the bottom tubular segment and the detent projects through the first notch, the rifle support is locked in a contracted position, and when the detent projects through the second notch of the bottom tubular segment the rifle support is locked in an extended position;
   b) a guiding tab disposed on the peripheral edge of the first end of the top tubular segment adjacent to the detent, wherein the guiding tab intersects with the guiding slit of the bottom tubular segment said guiding tab cooperating with elongate guiding slit for guiding the detent between the first and second notches; and
   c) a hand grip is disposed at the second end of the top tubular segment.

2. The telescoping rifle support as in claim 1 and further including a first and second intermediate telescoping tubular segment disposed between said bottom tubular segment and said top tubular segment wherein the first and second intermediate tubular segments comprise:

   a first end having a peripheral edge where a detent and guide tab are disposed;
   (1) a guiding slit extending a predetermined distance from the first end to the second end of said intermediate telescoping tubular segments;
   (2) a notch proximate the second ends of the intermediate telescoping tubular segments for receiving a detent of a mating telescoping tubular segment therein.

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