Aug. 3, 1948. F. P. SLOAN 2,446,197

GUN-SLING

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Fig 1

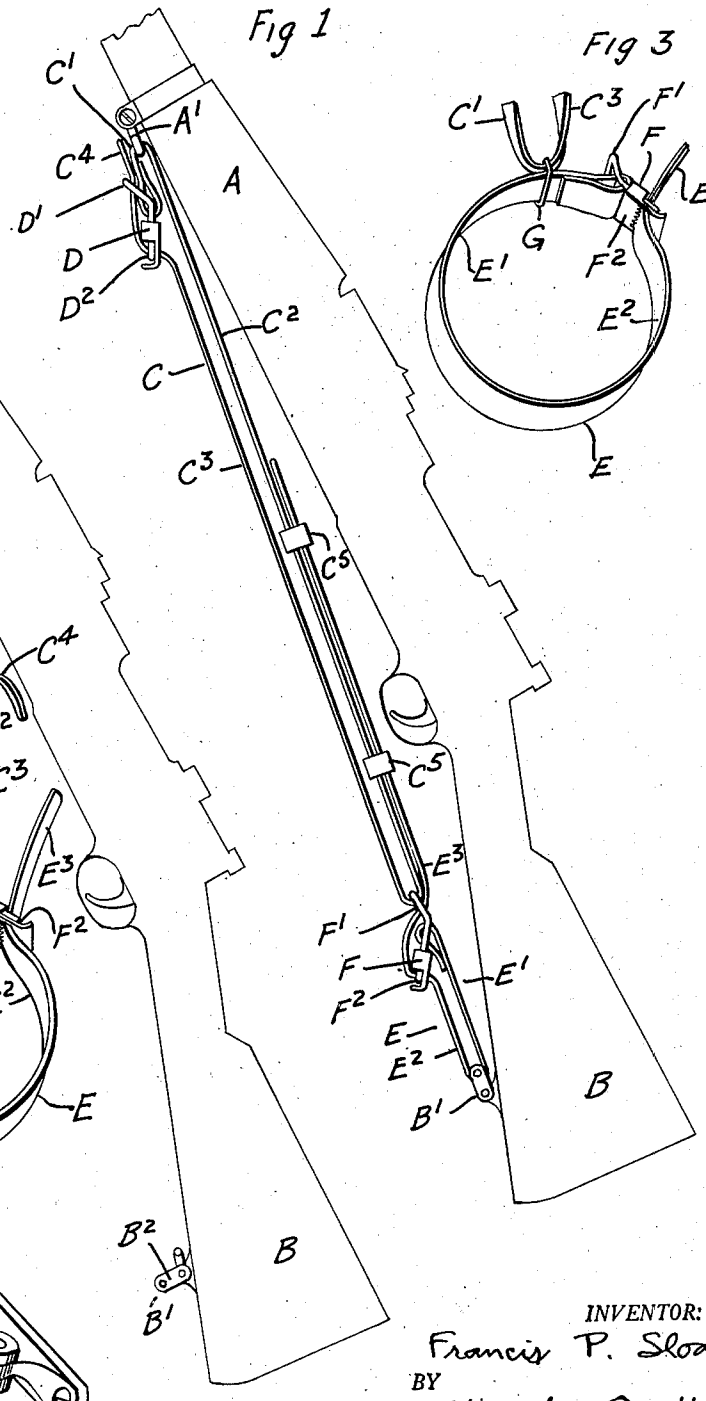



Fig 2

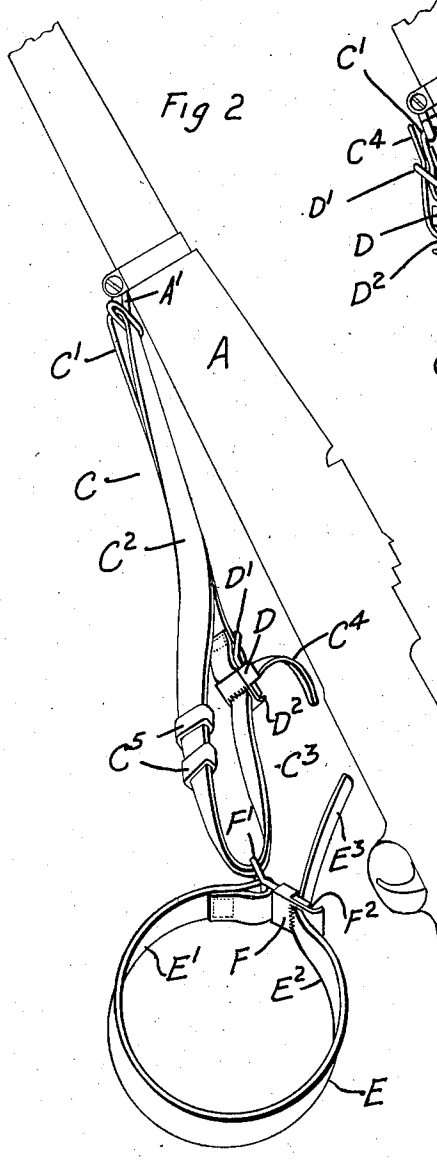
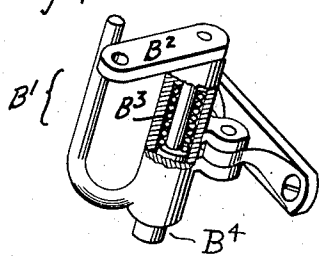



Fig 3




Fig 4




INVENTOR:
Francis P. Sloan
BY
Morrison, Kennedy & Campbell
Attorneys.

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Fig 5

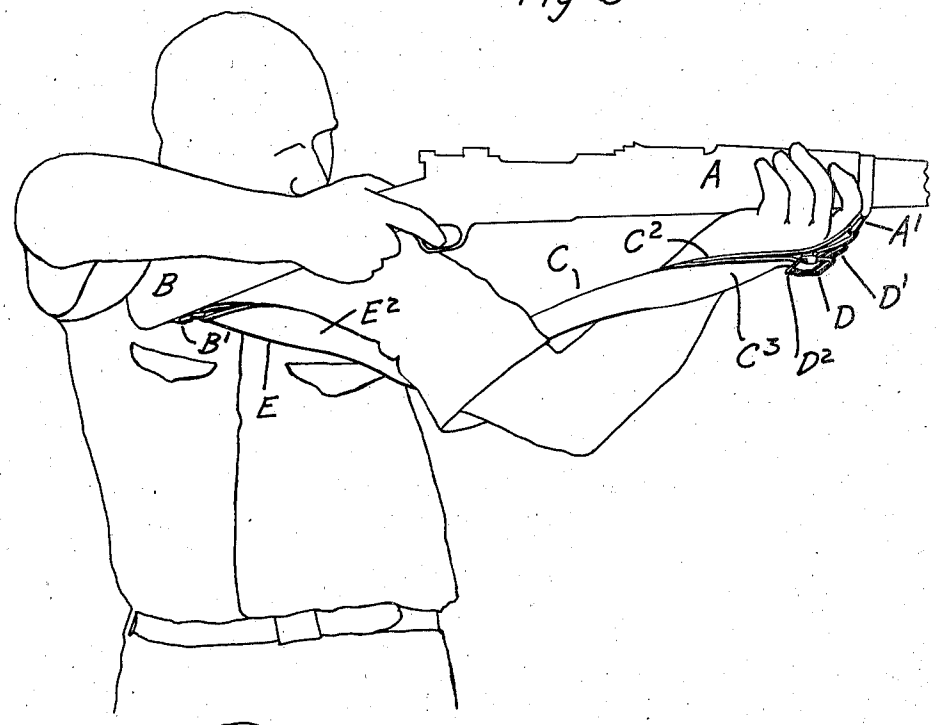
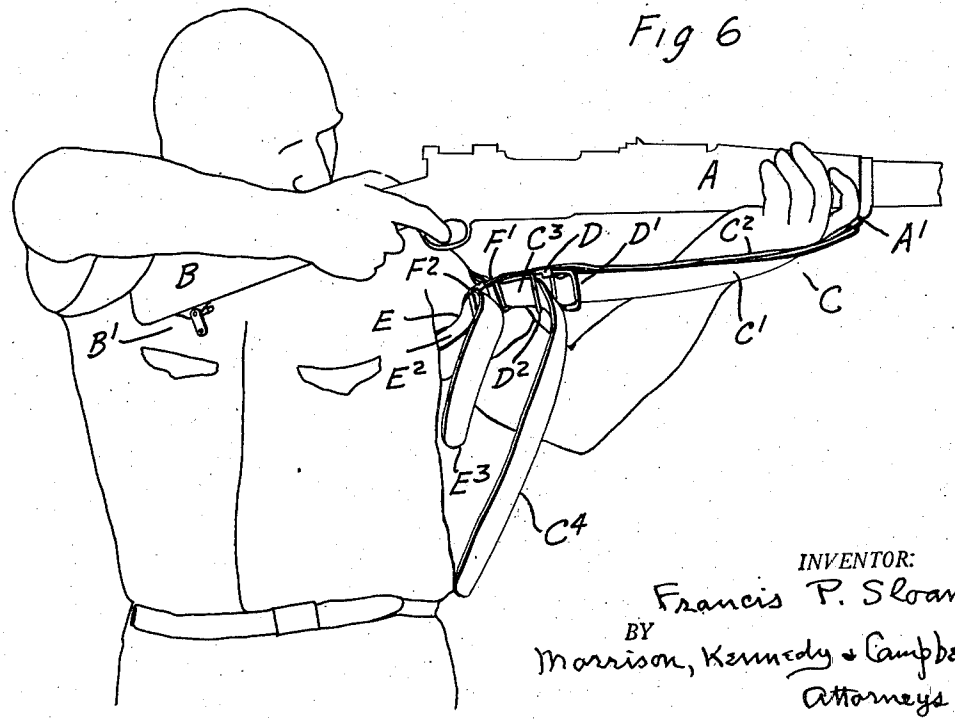



Fig 6




INVENTOR:
Francis P. Sloan
BY
Morrison, Kennedy & Campbell
Attorneys.

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## GUN-SLING

Francis P. Sloan, Wilton, Conn.

Application February 12, 1944, Serial No. 522,067

12 Claims. (Cl. 224—1)

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This invention is a novel gun-sling, involving improvements in the known kinds of slings used for carrying, aiming and shooting shoulder fire-arms, rifles or shotguns. The principal object of the invention is to provide a gun-sling that can be more easily, quickly and securely engaged with and fastened to the shooter's arm and more easily and quickly released and detached therefrom. Another object is to provide a gun-sling that can be easily and quickly readjusted and changed in length as may be necessitated when the shooter changes from one shooting posture to another. Another object is to provide such an improved gun-sling which may be economically manufactured, or can be produced by simple and inexpensive alterations of the standard U. S. Army gun-sling. Further objects and advantages of the invention will be explained during the hereinafter following description of an illustrative example, or will be apparent to those conversant with the subject.

In the accompanying drawings Figure 1 is a left side view of the improved sling applied to the gun in its disposition or adjustment of non-use, that is, as positioned on the gun for all purposes except for aiming and shooting or for carrying the gun by the sling over the shoulder; which may conveniently be designated its inactive position or adjustment.

Fig. 2 is a similar side view including a perspective view of the improved sling differently disposed, showing what will be termed the lower strap loop of the sling detached from the lower or gun-butt swivel or eye and rearranged or twisted into a position suitable to receive the left arm of the shooter, and to encircle the upper part of the arm.

Fig. 3 is a similar left view of part of the sling, in a modified form, illustrating an alternate method of linking or attaching the lower to the upper strap loop of the sling.

Fig. 4 is a perspective view partly in section of a preferred form of butt eye or swivel adapted to be opened for quick disengagement and release of the lower loop from the gun butt and swivel.

Fig. 5 is an elevational view of a shooter in the standing position aiming the gun and using the improved sling in what is known as the "hasty" manner.

Fig. 6 is a similar view of a shooter in the standing position aiming the gun and using the improved sling in the "regular" manner with its lower loop encircling his upper left arm.

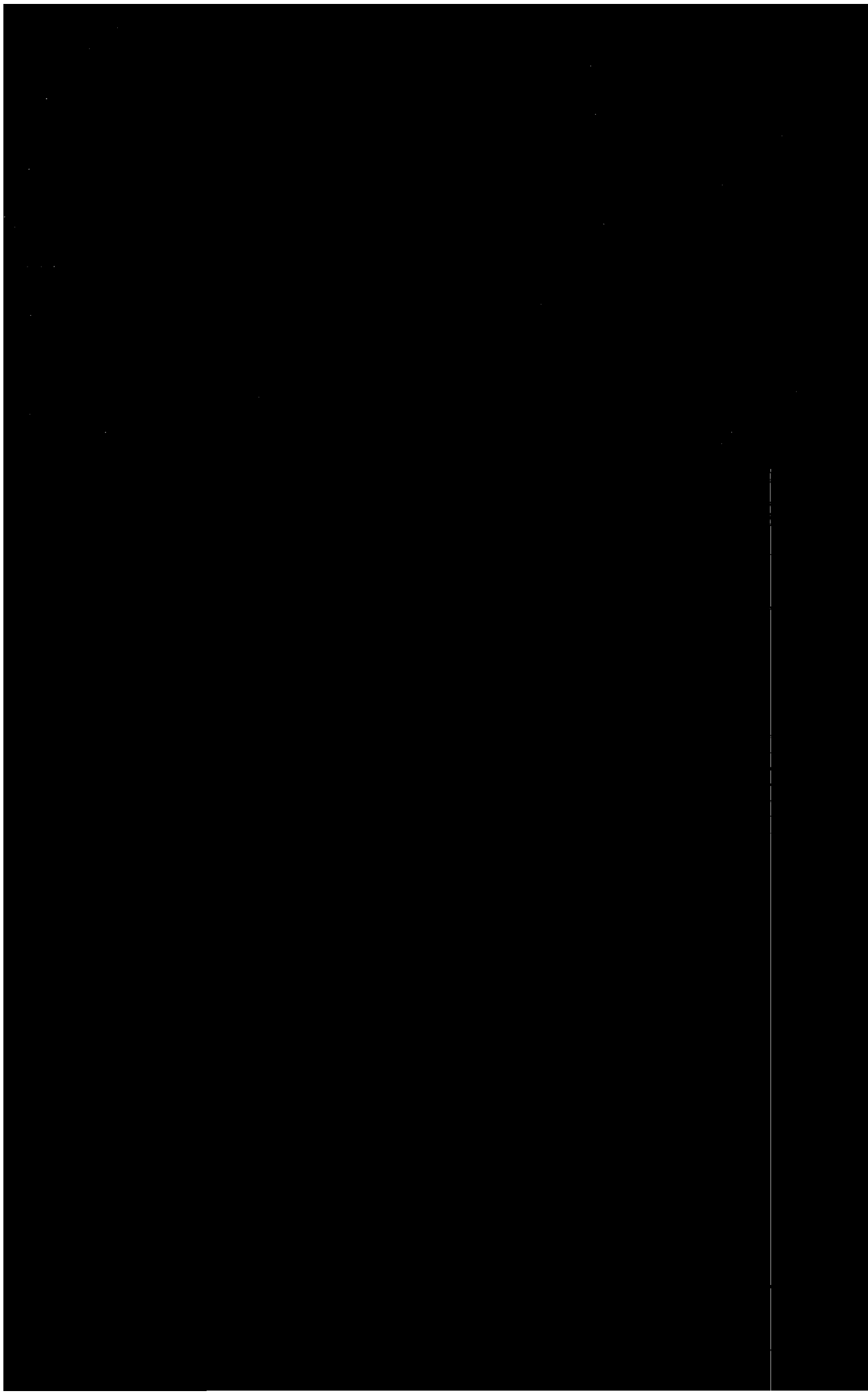
It is to be understood that the invention is of advantage in other postures of the shooter, as

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kneeling, squatting, sitting or prone, wherewith the so-called regular way of use may be followed.

The invention may first be generally outlined as follows. The gun is provided with an upper strap engaging swivel or pivoted eye A' on the upper part of the fore-stock A and a lower swivel or eye B' on the lower part of the butt-stock B; the butt eye being preferably openable for quick release of strap therefrom. The sling comprises in sequence an upper looped strap C and a separate lower looped strap E of flexible material engageable respectively in the upper and lower eyes or swivels. The upper strap has a take-up buckle D which makes of the strap a closed upper loop or fore loop which traverses and depends from the upper swivel and is adjustable in its effective length by means of the buckle and independently of the lower strap. The lower strap similarly has a buckle device F making of the strap a closed lower loop or butt loop adapted to traverse the lower swivel and adjustable in its effective length and tightness around the arm by means of the buckle and independently of the upper strap. These elements are combined into a unitary whole by means of an interconnecting member, such as a ball F' or a ring G, constituting a link engaging between the upper and lower loops. By this simple arrangement the sling, mounted on the gun, may be placed in its inactive setting as seen in Fig. 1 by shortening the sequence of link-connected loops so as to tauten the sling between the two swivels; while for the hasty manner of use the inactive setting is readily converted merely by lengthening the loop sequence, as by slipping the lower strap along through its buckle, thus providing a suitably slack adjustment between swivels, this use being illustrated in Fig. 5; and for regular aiming and shooting the lower loop may be disengaged from the gun butt, preferably by uncoupling it from a specially constructed lower swivel or eye B', and the loop then turned or twisted about, as seen in Fig. 2, and placed to encircle the shooter's upper arm, where it constitutes an arm-band that is readily shortened through its buckle F into a snug fit upon the arm, and the upper or fore loop then adjustably shortened through its buckle to provide a steadying tie or stay under tension between the arm and fore-stock, as seen in Fig. 6.

As illustrated, the gun-sling specifically consists of the two lengths or loops C and E of flexible strap material such as leather or fabric, the two buckles or equivalent strap gripping devices



from the left arm. (e) It is necessary to use only one hand to change the adjustment of either loop in any shooting position. (f) It is easy to loosen or tighten either loop without disturbing the adjustment of the other loop, because they are wholly separate and independent, and merely interconnected by a link, contrary to the prevailing slings wherein the strap loops are interdependent, and overlap in operation.

The advantages will be revealed by a comparison of the military manuals explaining the initial application and later adjustment of the standard sling with the following description of the steps for the application and adjustment of the improved sling of this invention.

(1) Rest rifle butt on right thigh with forestock against inside of right forearm.

(2) With left hand pull free end $E^3$ of the lower loop E nearly all the way back through jaws $F^2$ of buckle F, and detach lower loop E from the butt-stock or from butt-swivel B'.

(3) With right hand turn lower loop E between one quarter and one half turn and insert left arm, the right hand cooperating to move the loop high on left arm.

(3) With fingers and thumb of right hand pull the free end $E^3$ of lower loop E upwardly through the jaws $F^2$ of buckle F until the desired tightness is obtained; thus determining and holding the optimum construction of the arm.

(5) With the same fingers and thumb pull the buckle D down near buckle F and pull the free end $C^4$ of upper loop through jaws $D^2$ of buckle D until approximately the correct length of upper loop is obtained; thus affording the optimum tension for shooting purposes.

(6) Grasp forestock A of rifle close below the foreswivel A' with the left hand so that the upper loop C lies flat against the back of the left hand and wrist, and grasp the butt of the rifle with the right hand.

(7) Place the butt of rifle against right shoulder. If length of upper loop C is not correct alter it by moving the free end $C^4$ either way through the jaws of its buckle D. It will be unnecessary to shift the left hand from the forestock or to touch the lower loop adjustment.

Additional advantages are found in the improved sling over the standard when the shooter changes from one shooting position to another. A shift from the prone to the sitting position requires a shortening by several inches of the length of that part of the sling that connects the arm loop with the fore-stock swivel. In the Army type sling this requires two hands and necessarily upsets the adjustment of the part that encircles the arm. In the present sling, the right hand can readily make the adjustment alone and moreover can do this without disturbing the arm band because the arm band is a separate loop controlled by a separate buckle.

Manufacture of the sling of this invention is manifestly simple by conventional methods and, it may be of conventional materials, except that the preferred butt swivel or pivoted eye B' is of a special openable structure, e. g. as shown in Fig. 4.

Conversion of the present Army sling to the improved sling hereof is simply and economically accomplished. No change is necessary except to provide suitable buckles for the loop straps of the improved sling in place of the claws of the Army type, and to substitute the preferred sling-releasing eye or swivel at the rifle butt in place of the standard non-releasing swivel, and to reassemble and combine the two straps and keepers in the manner as shown in Fig. 1, with the linking members F' or G as interconnection between the strap loops.

The advantages of speed and ease of adjustment are obtained at no sacrifice of other desirable features; the weight is practically unchanged; the buckles are clear of the person of the shooter in the carrying and shooting positions, and moreover no metal parts can touch the gun.

Referring further to the special butt-swivel B', shown in perspective view in Fig. 4, this is constructed to present an eye for disengageable engagement by the lower loop E. One end of this eye is openable by reason of a movable end-piece or guard $B^2$, the free end of which is recessed to engage the outer bar of the eye, while the other end is pressed into closed position by a spring $B^3$. For this purpose the end-piece $B^2$ is attached to a plunger or pin $B^4$, which is surrounded by the spring $B^3$, and which protrudes at its far end, presenting a button which can be pressed to shift the plunger and end-piece, thus to open the swivel; and preferably the mounting is such that the end-piece when thus displaced can be swung around, as shown in Fig. 4, to facilitate the inserting or removing of the strap loop.

In the drawings the buckles are shown to be of the sliding-friction type which have no tongue and require no holes in the flexible strap material of the sling. The invention is not to be limited however to this preferred type of buckle because other buckles may be used operatively but without the full advantages. Similarly, the drawings show a preferred butt-swivel or eye that remains on the butt when releasing the sling. The improved sling will operate however with a butt-swivel that will release itself from the butt and follow the sling. It is even possible to disconnect the lower loop E from a non-releasing type of swivel by opening the buckle and pulling the free end of the loop through the swivel and then passing it back through the jaws of its buckle, causing delay. Similarly, the connection between or means linking together the upper loop and the lower loop may be made by different forms of link, such as the flat ring shown in Fig. 3. This would permit the use of a lower loop buckle without a bail. These and other such changes or variations in the size, shape, proportions and arrangement of the parts may be made without departing from the essence of the invention; and the claims are not intended to be limited to minor features or details except to the extent therein set forth.

What is claimed is:

1. For a shoulder gun having an upper eye at the forestock and a lower eye at the buttstock, a gun-sling comprising, in tandem sequence between said upper and lower eyes, three separate and distinct members consisting of, first, an upper closed-loop strap engaged with the upper eye and constituting a tension stay loop member between forestock and arm when set for regular shooting, second, an intermediate link member, and third, a lower closed-loop strap engaged with the lower eye when in inactive setting and constituting an arm-band loop member when disengaged from the lower end and set to encircle the arm for regular shooting; said upper or tension stay loop being engaged with both said upper eye and said link and slidable freely through one of them and having a take-up buckle device which closes the loop and provides for ready adjusting of

the effective length and tautness of the tension stay, when set for shooting, by one-hand manipulation of the buckle and free strap tail therebeyond and independently of the adjusting of the lower or armband loop; and said lower or arm-band loop being engaged with said link and having a take-up buckle device which closes the loop and provides for ready adjusting of the degree of circumferential constriction thereof around the arm, when set for shooting, namely, by one-hand manipulation of the buckle and free strap tail therebeyond and independently of the adjusting of the upper or tension stay loop; whereby for inactive setting the sequence of loops and link may be shortened between the gun stock eyes, while for regular shooting the arm band loop may be disengaged from the lower eye and placed to encircle the upper arm and there shortened into snug fit, and the tension stay loop independently adjusted as to its tautness to constitute a steadying tie between arm and forestock, and for hasty shooting the sequence of loops may be lengthened to a suitably slack adjustment.

2. For a shoulder gun having an upper eye at the forestock and a lower eye at the buttstock, a gun-sling comprising, in tandem sequence and as separate and distinct members, an upper closed-loop strap constituting a tension stap loop when set for shooting, an apertured intermediate link member, and a lower closed-loop strap constituting an arm-band loop when disengaged from the lower eye and set to encircle the arm for shooting; said upper or tension stay loop being engaged in the upper eye and slidable freely through said link aperture and having a take-up buckle device which closes the loop and provides for ready adjusting of the tautness of the tension stay by one-hand manipulation of the buckle and free strap length therebeyond and independently of the adjusting of the arm-band loop; and said lower or arm-band loop being engaged with the lower eye and said link, and having a take-up buckle device which closes the loop and provides for ready adjusting of the tightness thereof around the arm, namely, by one-hand manipulation of the buckle and free strap length therebeyond and independently of the adjusting of the tension stay loop.

3. For a shoulder gun a gun-sling comprising a fore loop and a separate butt loop, with an apertured link interconnecting the two loops in tandem, the fore loop being adapted to traverse a fore swivel on the gun and to slide freely through the link aperture and to act as a stay tensioned between the fore swivel and the shooter's upper arm, and the butt loop being adapted to traverse a butt swivel on the gun and to be disengaged therefrom and spread into an arm-encircling loop, and each loop having a take-up means or buckle for adjusting its effective length independently of the adjusting of the other loop.

4. A gun-sling for a shoulder firearm having a forestock and a buttstock, and comprising two independently enlargeable and contractable loops of strap material, with a slidable link member wholly separate from but interconnecting the two loops, said link having an aperture through which at least one of said loops freely slides, a fore-eye connecting the fore-loop to the forestock and a butt-eye connecting the butt-loop detachably to the buttstock; each loop having its own take-up device or buckle for adjusting its length; the butt-loop being adapted to encircle completely the shooter's arm with a degree of tightness determined by its adjustment, and the fore-loop being adapted to act as a tension tie between the fore-eye and the link member on the butt loop with a degree of tension determined by its adjustment.



5. For a shoulder gun the combination of the five following elements in interconnected sequence (1) an upper eye at the gun forestock, (2) an upper closed-loop strap constituting a tension stay loop, (3) an apertured intermediate link member, (4) a lower closed-loop strap constituting an arm-band loop to encircle the arm for shooting, and (5) a lower eye at the gun buttstock; said upper loop being engaged in the upper eye and in the link aperture and slidable freely through at least one thereof and having a buckle which closes the loop and provides for ready adjusting of the tautness of the upper loop independently of the adjusting of the arm-band loop; and said lower loop being engaged with the lower eye and said link, and having a buckle which closes the loop and provides for ready adjusting of the tightness thereof around the arm independently of the adjusting of the tension stay loop.

6. A gun-sling as in claim 1 and wherein the intermedate link member comprises a rigid apertured extension or bail extending from the buckle device of the lower arm-band loop and through which the upper tension stay loop is freely slidable.

7. A gun-sling as in claim 1 and wherein the intermediate link member comprises a rigid separate ring piece through which both the upper and lower loops are slidable.

8. A gun-sling as in claim 1 and wherein the lower or buttstock eye is openable without detachment from the gun to permit ready disengagement of the arm-band loop from the gun butt stock and eye without opening said loop.

9. A gun-sling as in claim 5 and wherein the lower or buttstock eye or swivel is permanently attached to the butt and constructed with means permitting it to be readily opened by hand for the detachment therefrom of the arm-band loop.

10. A gun-sling consisting of a chain of five loops in tandem, loops numbers one, three and five being of rigid material, loops numbers two and four of flexible strap material; loop number one being a swivel attached to the gun butt, loop number five a swivel attached at the forestock of the gun; loop number two being an arm band adapted to encircle the shooter's arm, and to pass through loop number one; loop number four being adapted to serve as a tension member or stay and to pass through loop five; loop number three being arranged to link closely to one thickness of loop number two and one thickness of loop number four; loops numbers two and four each being a closed loop having a buckle and a free end beyond the buckle for one-hand adjustment of loop size and tautness or tension; the adjustment of loop number two being independent of change of size or tension of loop number four, and the adjustment of loop number four beng independent of change of size or tension of loop number two; loop number one being openable for engagement and disengagement of loop number two; whereby when the loop chain is set with loops numbers one and two engaged the gun-sling may be tautened into "parade" sling and when the chain consists of loops numbers two, three, four and five only it may be used to associate the gun with the shooter's arm in shooting position.

11. A gun-sling consisting of a chain of three separate closed loops, a lower and an upper loop

of strap material, and a middle loop of rigid material, all attachable between the swivels of the gun; the lower loop being adapted to be tightened constrictingly around the shooter's arm, the separate upper loop being adapted to function as a tension member slidably attached to the upper part of the gun, and the middle loop adapted to link closely and slidably to one thickness of the lower loop and one thickness of the upper loop; the lower loop having a buckle and a free strap end for one hand adjustment of size and tightness of the loop around the arm without change of the other loops, the upper loop having a buckle and a free strap end for one hand adjustment of size and tension of the loop between the gun and the middle loop, without change of the other loops, and the two independent adjustments being readily made while the gun is being aimed or otherwise handled.

12. A gun-sling adapted to extend between the upper and lower swivels of a gun and consisting of two separate loops of strap material linked together only by a sliding connector; the lower loop being adapted to encircle the arm of the shooter, and the upper loop being adapted to extend between the lower loop and the upper swivel of the gun, with the connector between them; each loop having a buckle and a free strap end for independent single-handed adjustment of loop size or tension; the arm-encircling lower loop being adjustable in size and tightness without change of size or tension of the upper loop, and the upper loop being adjustable in size and tension independently of and without change of size or tightness of the lower loop; whereby any one or more of such adjustments are readily made in any sequence by the trigger hand alone when the gun is in the shooting position or otherwise handled.



FRANCIS P. SLOAN.

## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 1,088,314 | Wilcke | Feb. 24, 1914 |
| 1,332,088 | Wagner | Feb. 24, 1920 |
| 1,383,125 | Kennedy | June 28, 1921 |
| 1,396,270 | Gierson | Nov. 8, 1921 |
| 2,357,363 | Smith et al. | Sept. 5, 1944 |

FOREIGN PATENTS

| Number | Country | Date |
|---|---|---|
| 90,695 | Sweden | Nov. 2, 1937 |