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2,595,834

RIFLE SAFETY ATTACHMENT

Filed Nov. 20, 1950

FIG.1.

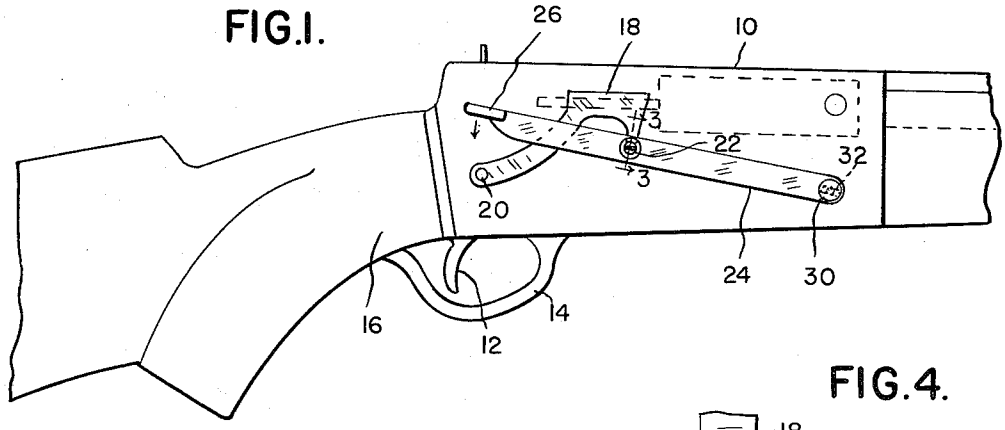
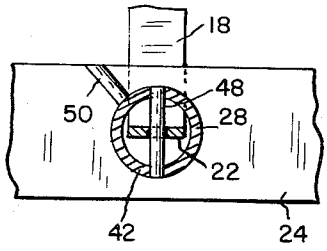


FIG.4.



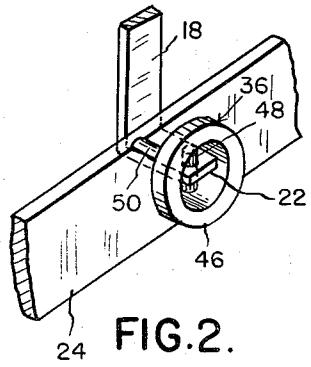


FIG.2.

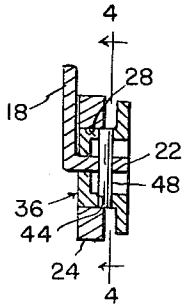


FIG.3.

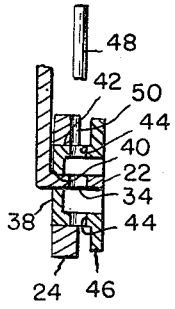


FIG.5.

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RIFLE SAFETY ATTACHMENT

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14 Claims. (Cl. 42—70)

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The present invention relates to a rifle attachment and more particularly to an actuator adapted to be added to a rifle to permit actuation of the present safety on the rifle from a different point. More specifically, rifle safeties are generally designed for operation by right-handed operators. It is inconvenient at best for left-handed operators to release the safety with the rifle in firing position. According to the present invention a separate lever is added to the rifle having a finger piece thereby disposed in position to be operated while the rifle is in firing position by a left-handed user.

In order to carry out the foregoing it has been necessary to devise an actuator which permits actuation of a first lever about a fixed axis of rocking by a second lever which is mounted for combined rocking and sliding movement relative to a second axis spaced from and parallel to the first axis. Means are provided for coupling the two levers together so as to provide a partial support for the secondary lever.

With the foregoing general remarks in mind, it is an object of the present invention to provide coupling means between two levers to mutually support the levers and to provide for relative rocking movement between the levers.

More specifically, it is an object of the present invention to provide means for coupling a second lever to a first lever which is provided with a laterally extending projection, which comprises an opening in the second lever adapted to receive the projection on the first lever, a coupling member located in the opening, and means interconnecting the coupling member and the projection.

More specifically, it is a feature of the present invention to provide means for coupling a second lever to a first lever having a lateral projection thereon which comprises a flanged cup received in a circular opening in the second lever, the projection of the first lever extending within the cup and a pin connecting the cut to the lateral projection, the cup being provided with a radially extending flange to retain the levers in assembled relation.

Other objects and features of the invention will become apparent as the description proceeds, especially when taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a fragmentary side elevation of a rifle illustrating the conventional safety applied thereto together with the new and improved safety.

Figure 2 is a perspective view with parts broken away illustrating the interconnection between the usual safety on the rifle and the actuator therefore.

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Figure 3 is a fragmentary enlarged section on the line 3—3, Figure 1.

Figure 4 is a section on the line 4—4, Figure 3.

Figure 5 is a view similar to Figure 4 illustrating the levers in position for the reception of the retaining pin.

Referring now to the drawings in Figure 1 there is illustrated a rifle 10 having a trigger 12, a trigger guard 14, and a reduced portion of the stock 16 which is normally gripped by the right hand of a right-handed user. Mounted on the right hand side of the rifle is a safety lever 18, this lever being mounted for rocking movement about a fixed pivot point 20 and having a laterally or outwardly projecting finger piece 22, by means of which the lever is normally operated by a right-handed user.

It will be observed that the finger piece 22 is in position where it may be engaged by a right-handed user without substantially shifting his hand from position on the reduced portion 16 of the stock and without withdrawing his fingers from the trigger guard 14. However, when the rifle is fired by a left-handed user the finger piece 22 is in such position that the user must either operate the safety lever 18 with his right hand, or completely disengage his left hand from the reduced portion 16 of the stock.

Accordingly, in order to provide actuating means for the safety lever which is in position to be operated by a left-handed user while holding the rifle in firing position, there is provided an attachment comprising a lever 24 having a finger piece 26 located closely adjacent to the reduced portion 16 of the stock. The finger piece 26 may thus be operated by the thumb of a left-handed user without removing his left hand generally from the firing position.

The lever 24 is provided with a circular opening 28 in such position that it overlies the finger piece 22 of the usual safety lever 18. Coupling means are provided between the two levers. However, since the finger piece 22 can move only in an arc concentric with the pivot axis 20, additional means must be provided to permit the lever 24 to accommodate itself to this movement of the finger piece 22. This is accomplished by providing a special pivot support for the lever 24 which comprises an elongated slot 30 receiving a screw 32 threaded into an opening in the receiver of the rifle. Thus, the lever 24 is mounted

for a combined swinging or rocking and sliding movement about the axis of the screw 32.

The construction which interconnects the levers 18 and 24 is best seen by reference to Figures 2–5. The lever 18 as previously described, is provided with a laterally extending finger piece or projection 22 which is provided with a pin receiving opening 34. A coupling body 36 is provided which is received within the circular opening 26 of the lever 24 and which is adapted to be connected to the finger piece 22. As best seen in Figures 3 and 5, the coupling body 36 is in the form of a cup having a closed end 38 provided with a slot or opening 40 therethrough for the reception of the finger piece 22. The cup includes a cylindrical side wall 42 having opposed openings 44 therein. At its open end the cup is provided with a radially extending flange 46.

The coupling body 36 is retained in assembled relation on the projection 22 by a coupling pin 48 as best seen in Figure 3. As seen in this figure the pin is retained against displacement from its position within the aligned openings 34 and 44 due to the fact that portions of the lever 24 overlie the ends of the oppositely disposed openings 44.

In order to assemble the elements, the lever 24 is provided with a slot or groove 50 which extends from one edge of the lever radially into the cylindrical opening 26 through the lever. The location of the groove 50 is such that throughout the normal range of relative movement between the levers 18 and 24, the groove 50 remains out of alignment with the aligned openings 34 and 44. In order to assemble the parts the screw 32 is removed, the lever 24 is swung to a position in which the groove 50 registers with the aligned openings 34 and 44, and the pin 48 is inserted. As is best illustrated in Figure 5, the pin at this time may be moved inwardly until its lower end engages the inner surface of the circular opening 26 directly opposite to the groove 50. Thereafter, the levers are located substantially to operating position and the lever 24 is mounted on the side of the rifle by inserting the screw 32 through the elongated aperture 30.

It will be observed that the coupling body 36 is thus securely pinned to the finger piece or projection 22 on the safety lever 18. Moreover, its radially extending flange 46 serves as an abutment which prevents the free end of the lever 24 moving outwardly, and thus positively couples the two levers together. Moreover, the outer cylindrical surface of the coupling body 36 serves as a bearing against the inner surface of the circular opening 26 provided in the auxiliary or operating lever 24.

The attachment is simple to construct and requires only the boring of a hole through the lateral projection 22 and the provision of a tapped hole at the side of the rifle for the reception of the screw 32.

While the present invention has been devised particularly to provide an extension for a rifle safety in position to be operated by a left-handed user, it will be readily apparent that the coupling connection between the safety lever 18 and the auxiliary lever 24 is capable of general application and may be employed whenever it is desired to connect two levers or similar members together for relative rocking movement while retaining them against separation.

The drawings and the foregoing specification constitute a description of the improved rifle attachment in such full, clear, concise and exact terms as to enable any person skilled in the art

to practice the invention, the scope of which is indicated by the appended claims.

What I claim as my invention is:

1. In combination with the safety of a rifle, the safety being in the form of a lever having an outwardly extending operating projection movable in a vertical plane at one side of the rifle in position to be operated by the user without removing his hand from firing position on the gun, an attachment for actuating said safety lever comprising a lever, pivot means mounting said attachment lever for swinging movement in a vertical plane in a position overlying the projection on said safety lever, said attachment lever having an opening intermediate its length into which said projection extends.

2. The structure as defined in claim 1 including means locking said projection to said attachment lever.

3. The structure as defined in claim 2, said last means comprising a hollow flanged body rotatably received in the opening in said attachment lever and surrounding said projection, and a pin extending through a side of said body into the projection on said safety lever.

4. The structure as defined in claim 3, said pivot means comprising an opening in said attachment lever elongated longitudinally of said lever and a pivot element extending through said opening.

5. Means for interconnecting a first and second lever for simultaneous swinging movement about spaced parallel axes, comprising pivot mounts for said levers, the pivot mount for one of said levers including means providing for longitudinal movement of said one lever relative to the axis of its pivot mount, a lateral projection on said first lever, said second lever overlying said first lever and having a circular opening therein through which said projection extends, a retainer of circular cross-section in said opening having a flange engaging the side of said second lever remote from said first lever, and means connecting said retainer to said projection.

6. Means for interconnecting a first and second lever for simultaneous swinging movement about spaced parallel axes comprising a lateral projection on said first lever, said second lever overlying said first lever and having a circular opening therein through which said projection extends, a retainer having a side wall of circular cross-section located within said circular opening, said retainer having diametrically opposed pin-receiving openings formed at opposite sides thereof with portions of said openings disposed at opposite sides of the plane of a side of said second lever, said side of said second lever having a groove therein, said projection having a pin-receiving opening therein, said second lever being swingable before mounting into a position such that said groove registers with one of the pin-receiving openings in said retainer, a pin insertable at such time through said groove, the openings in said retainer and the opening in said projection, movement of said second lever to mounting position moving said groove out of registration with the openings in said retainer to lock said pin in position extending across said retainer and through the opening in said projection.

7. Means for coupling a first member having a lateral projection to a second member having a circular opening in registration with said projection for relative swinging movement about the

axis of said circular opening, said projection extending through said opening, a hollow body of circular cross-section rotatably received within said opening, a flange on said body engageable with the side of said second member remote from said first member, and means connecting said body to said projection.

8. Structure as defined in claim 7 in which said projection and the side walls of said body have aligned openings therein, said second member having a groove formed in one side thereof extending from an edge thereof into said circular opening in a position normally out of alignment with said aligned openings, and a retainer pin insertable through said groove when aligned with said openings into said openings and retained in place by the inner surface of said circular opening when said groove is out of alignment with said aligned openings.

9. Structure as defined in claim 8, said hollow body being cup shaped and having a closed end opposite its flanged end, said closed end having a slot therein for receiving said projection.

10. A first lever having a laterally extending operating projection, means mounting said lever for rocking movement about a first axis, a second lever for moving said first lever, means mounting said second lever for combined rocking and sliding movement about a second axis spaced from and parallel to said first axis, said second lever closely overlying said first lever and having a circular opening therethrough for receiving said projection, a cup having a closed end wall, cylindrical side walls, and an open end with a radially extending flange at its open end, said closed end wall having an opening therein for receiving said projection, said cup being located in said circular opening with its closed end adjacent said first lever and its radially extending flange disposed outwardly from the side of said second lever remote from said first lever, and means securing said cup to said projection.

11. Structure as defined in claim 10 in which said last means comprises a pin, said projection and the opposite sides of said cup having aligned openings therein, said second lever having a groove extending from one edge thereof to said circular opening in a position out of alignment with said aligned openings when said levers remain within their normal range of movement but movable into alignment therewith to permit insertion of said pin into said aligned openings, the inner surface of said circular opening preventing removal of said pin when said levers are within their normal range of movement.

12. Structure as defined in claim 11, said groove being located in the side of said second lever remote from said first lever.

13. In combination with the safety of a rifle, the safety being in the form of a lever having an outwardly extending operating projection movable in a vertical plane at one side of the rifle

in position to be operated by the user without removing his hand from firing position on the gun, an attachment for actuating said safety lever comprising a lever, pivot means mounting said attachment lever for swinging movement in a vertical plane in a position overlying the projection on said safety lever, said attachment lever having an opening intermediate its length into which said projection extends, a hollow flanged body rotatably received in the opening in said attachment lever and surrounding said projection, said projection and the side walls of said body having aligned openings therein, said attachment lever having a groove formed in one side thereof extending from an edge thereof into said opening therein in a position normally out of alignment with said aligned openings, and a retainer pin insertable through said groove when aligned with said aligned openings into the latter and retained in place by the inner surface of the opening in said attachment lever when said groove is out of alignment with said aligned openings.

14. Means for interconnecting a first and second lever for simutlaneous swinging movement about spaced parallel axes, comprising pivot mounts for said levers, the pivot mount for one of said levers including means providing for longitudinal movement of said one lever relative to the axis of its pivot mount, a lateral projection on said first lever, said second lever overlying said first lever and having a circular opening therein through which said projection extends, a hollow retainer of circular cross-section rotatably received within said opening and surrounding said projection, said retainer having a flange engaging the side of said second lever remote from said first lever, means securing said retainer to said projection comprising a pin, said projection and the opposite sides of said retainer having aligned openings therein, said second lever having a groove extending from one edge thereof to said circular opening in a position out of alignment with said aligned openings when said levers remain within their normal range of movement but movable into alignment therewith to permit insertion of said pin into said aligned openings, the inner surface of said circular opening preventing removal of said pin when said levers are within their normal range of movement.

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