July 5, 1960 J. M. McNALLY 2,943,412

TRIGGER OPERATING MEANS FOR A PISTOL

Filed Sept. 18, 1953

Fig. 1.

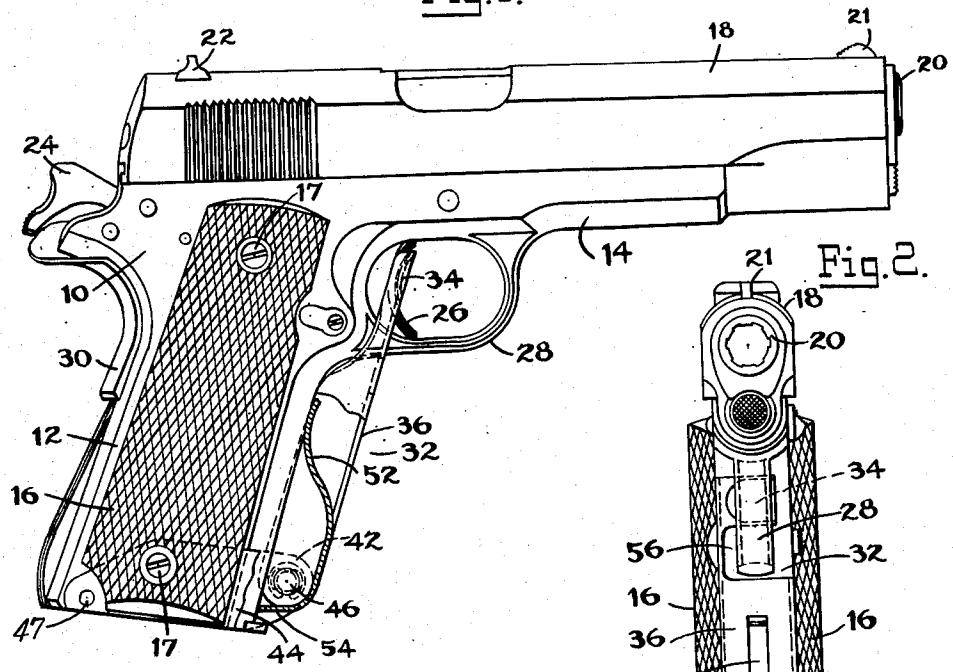


Fig. 2.

Fig. 5.

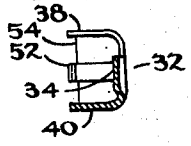


Fig. 3.

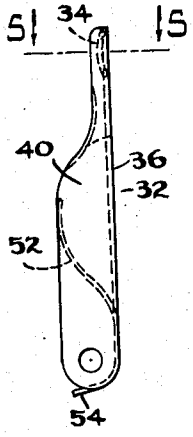


Fig. 4.

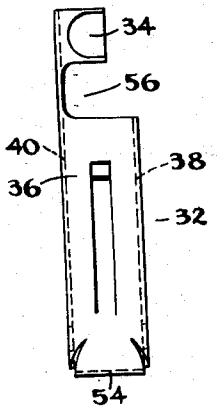
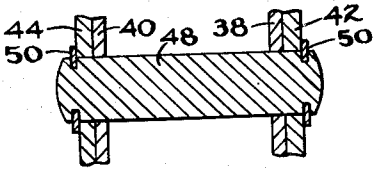


Fig. 6.



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TRIGGER OPERATING MEANS FOR A PISTOL

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8 Claims. (Cl. 42—69)

The invention relates to a pistol and an operating means for the trigger of the pistol, the said operating means being additional to the trigger and being engageable therewith at the front thereof.

One object of the invention is to provide a pistol attachment which includes a member relatively movable by the user's hand so as to indirectly operate the trigger and which has certain advantageous features. The attachment is particularly intended for use under cold weather conditions when the user wears a mitten and cannot readily press the trigger in the conventional manner.

One of the particular advantages of an attachment embodying the invention is that it can be attached to a standard pistol without the necessity for any major alterations therein or modifications thereof. The attachment includes a pivoted trigger operating member which is at the front of the grip portion of the pistol and which is movable about a transverse axis preferably spaced forwardly from the said grip portion. The said operating member has an integral spring for engaging the grip portion to bias the member for forward movement and the said member has an integral stop for engaging the grip portion to limit forward movement. The operating member is notched to receive the trigger guard so that a portion of said member can engage the trigger without cutting or modifying the said guard.

A further object of the invention is to provide the combination of a pistol and a trigger operating means as above set forth.

Other objects of the invention will be apparent from the drawing and from the following description and claims.

In the drawing I have shown in detail a preferred embodiment of the invention, but it will be understood that various changes may be made from the construction shown, and that the drawing is not to be construed as defining or limiting the scope of the invention, the claims forming a part of this specification being relied upon for that purpose.

Of the drawing:

Fig. 1 is a side view of an automatic pistol and of a trigger operating attachment embodying the invention, a portion of the attachment being shown in vertical central section.

Fig. 2 is a front view of the pistol and the attachment as shown in Fig. 1.

Fig. 3 is a side view of the trigger operating member constituting the major portion of the attachment.

Fig. 4 is a front view of the trigger operating member as shown in Fig. 3.

Fig. 5 is a view taken along the line 5—5 of Fig. 3.

Fig. 6 is an enlarged fragmentary sectional view taken along the line 6—6 of Fig. 2.

Figs. 1 and 2 of the drawing show a pistol which has been selected to illustrate the applicability of the invention, the pistol shown being of the automatic type. However, certain features of the invention are applicable to a

pistol of the revolver type or to an automatic pistol differing substantially from that shown.

As to its details of construction, the automatic pistol which is shown in the drawing may be similar to the pistols shown in the Tansley Patent No. 1,719,384 and in the Swartz Patent No. 2,140,946. The said automatic pistol as shown includes a frame 10 having a lower rear grip portion 12 and having a forwardly extending upper portion 14. The grip portion is provided with opposite stock plates 16, 16 held in place by screws 17, 17. A longitudinal main slide 18 is provided which is guided for longitudinal movement along the upper part of the frame. A barrel 20 is positioned chiefly within the slide 18 and is so connected with the frame and the slide that it has only limited longitudinal movement. A reaction spring which is not shown biases the slide 18 for forward movement. Suitable front and rear sights 21 and 22 are provided on the slide 18.

A spring-pressed pivoted hammer 24 is carried by the frame for engaging a firing pin in the rear portion of the slide to effect firing, the hammer as shown in Fig. 1 being in its cocked position. A rearwardly movable trigger 26 is provided on the frame near the front of the upper part of the grip portion, the said trigger being within a trigger guard 28 formed integrally with the frame or secured thereto. A portion of the trigger guard is below the trigger. The trigger is biased to its forward position by a suitable spring means which is not shown. The hammer 24 can be released by pressing the trigger 26 rearwardly in opposition to the said spring means. The mechanism for the release of the hammer 24 by means of the trigger 26 may be similar to the mechanisms for this purpose shown in the aforesaid patents. Upon firing, the slide 18 moves rearwardly as the result of recoil and in opposition to the reaction spring and in so moving it engages the hammer 24 to restore the hammer to its cocked position. Also during rearward recoil movement of the slide the cartridge shell is extracted and ejected by conventional means which are not shown.

The grip portion 12 of the frame is hollow and is adapted to receive a cartridge magazine which serves in the conventional manner to successively supply cartridges to a position in which each cartridge is engaged by a portion of the slide and is forced into the chamber of the barrel 20 when the slide is moved forwardly by the reaction spring after recoil.

The pistol is preferably provided with a pivoted grip safety member 30 at the upper rear of the grip portion 12 of the frame, this member being movable forwardly from the position shown in Fig. 1 by the hand of the user when the grip portion 12 is engaged to effect firing. Firing can be effected only when the grip member 30 has been moved to its forward position.

The trigger operating attachment to which the invention more particularly relates comprises a trigger operating member 32 having means near the bottom thereof for connecting the said member to the grip portion 12 of the pistol so that it is movable about a transverse pivotal axis near the bottom of the said grip portion and spaced forwardly from the front thereof. The member 32 includes a lug portion 34 near the top thereof which portion is slidably engageable with the trigger 26 at the front concave surface thereof. The member 32 also includes an operating portion 36 which is exposed at the front and is located between the pivotal axis near the bottom and the trigger engaging lug portion 34 near the top.

The trigger operating member 32 may be varied widely as to details, but it is shown as being formed of sheet metal and bent to a channel shape as best shown in Fig. 5. The side walls of the channel are indicated at 38 and

40. The lower part of the grip portion 12 of the frame carries a yoke member having a pair of parallel spaced flanges 42 and 44 at opposite sides of said grip portion, said flanges constituting pivot plates for supporting the trigger operating member. The stock plates 16, 16 are recessed to provide clearances for the said flanges 42 and 44, the last said flanges being held in place by a transverse pin or rivet 47 at the rear and by the lower screws 17 which hold the stock plates. Aligned apertures are provided in the flanges 42 and 44, these apertures being spaced forwardly from the grip portion of the pistol, and similar aligned apertures are provided in the side walls 38 and 40 of the member 32. A pivot pin 48 extends through these several apertures as best shown in Fig. 6. Split washers 50, 50 enter annular grooves in the pin 46 to prevent endwise movement of the said pin. The channel shape of the member 32 enables it to constitute a forward extension of the grip portion 12. The said grip portion and the said member present a combined shape which can be conveniently and comfortably gripped by the user.

A spring is provided which biases the member 32 for pivotal movement in the forward direction. As shown, there is a spring 52 which is located above the pivotal connection and which abuts directly against the front face of the grip portion 12 of the frame. The spring 52 may advantageously be formed as an integral part of the pivoted member 32. The front portion 36 of the member is slotted, as shown in Fig. 4, and the metal removed from the slot is bent rearwardly to form the said spring 52.

A stop is provided for limiting pivotal movement of the member 32 in the forward direction. As shown, there is a stop 54 which is located below the pivotal connection and which abuts directly against the front face of the grip portion 12 of the frame. The stop 54 may advantageously be formed as an integral portion of the member 32.

In order to avoid interference with the trigger guard 28 and in order to avoid any necessity for modifying the trigger guard, one of the side walls 38 and 40 of the member 32 is terminated at a level below the said guard, the wall 38 being shown as so terminated. The shorter side wall 38 is herein sometimes designated as the first wall and the longer side wall 40 is sometimes herein designated as the second wall. The trigger engaging portion 34 of the member 32 is carried entirely by the second side wall 40 as best shown in Fig. 4. A notch 56 is formed below the portion 34 to provide clearance for the trigger guard. The trigger engaging portion 34 is shaped so that it is convex at the rear to conform to the concave front shape of the trigger 26.

A pistol equipped with the described trigger operating attachment may be used in the conventional manner. As before stated, the channel shaped member 32 constitutes a forward extension of the grip portion 12. The pistol may be gripped in the usual manner with the user's index finger within the trigger guard at the front of the trigger and with the rear portion of the user's hand pressing the safety member 30 forwardly. For firing, the user may press rearwardly with his index finger against the lug portion 34 of the member 32, the said lug portion 34 serving to move the trigger. The user's other fingers are in engagement with the portion 36 of the member 32 and it is ordinarily more convenient to apply rearward pressure by all four fingers rather than by the index finger alone.

Under cold weather conditions the user may be wearing a heavy mitten which makes it impossible to insert his index finger within the trigger guard. Under such conditions, the user grips the pistol with his index finger positioned below the trigger and below the trigger guard. Firing may be effected by a squeezing action which presses the member 32 rearwardly so that the portion 34 thereof moves the trigger rearwardly.

The trigger operating member 32 together with the pivotal attaching means therefor may be manufactured and sold as an attachment for use on a previously or separately constructed pistol. For the attachment as shown, the particular pistol disclosed requires no modification except the formation of clearance recesses in the stock plates and the provision of a suitable retaining pin or rivet 47. The recessing of the stock plates does not affect their utility when the attachment is not in place, and the said recessing affects the appearance only slightly. For other pistols of different types, minor changes in the attachment may be necessary to conform to different pistol details.

The invention claimed is:

1. A trigger operating attachment for use with a pistol including a frame having a grip portion and including a rearwardly movable trigger located near the front of the upper part of said portion, said attachment comprising: two pivot plates connected to the lower part of said portion, at opposite sides thereof and projecting forwardly therefrom, and having transversely aligned holes in front of the said portion; a transverse pivot pin extending through said holes, a trigger operating member transversely apertured to receive said pivot pin so that said member is connected to said plates for movement about a transverse pivotal axis in front of said grip portion when the plates are connected as aforesaid; said operating member including a lug near the top thereof which is engageable with the front of said trigger, and a forwardly exposed portion, located between said pivotal axis and said lug, which exposed portion is engageable at the front thereof by fingers of the user positioned below the said lug and is thereby movable rearwardly so as to cause the said lug to move said trigger rearwardly for firing; said operating member being formed of sheet metal, channel-shaped in horizontal section and having a front wall and transversely spaced side walls, the metal of said front wall being cut and bent to provide an integral spring which is above said pivotal axis and which extends rearwardly from said front wall and is engageable with the front face of the grip portion of the pistol for biasing said member for forward pivotal movement.

2. A trigger operating attachment as set forth in claim 1, wherein a stop is provided which is integral with said front wall and which extends rearwardly below said pivotal axis and is engageable with the front face of said grip portion for limiting forward pivotal movement of said member.

3. In combination with a pistol having a frame with a grip portion and a rearwardly movable trigger located near the front of the upper part of said portion, a trigger operating attachment comprising: two pivot plates connected to the lower part of the grip portion of said pistol at opposite sides thereof and projecting forwardly therefrom, said plates having transversely aligned holes in front of said portion, a transverse pivot pin extending through said holes, a trigger operating member transversely apertured to receive said pivot pin so that said member is connected to the said plates for movement about a transverse pivotal axis in front of said grip portion; said operating member including a portion near the top thereof which is engaged with the front of said trigger, and a forwardly exposed portion, located above said pivotal axis and below said trigger engaging portion, which exposed portion is engageable at the front thereof by fingers of the user and is thereby movable rearwardly so as to cause the said trigger engaging portion to move the trigger rearwardly from firing; said operating member being formed of sheet metal, channel-shaped in horizontal section, and having a front wall and transversely spaced side walls, the metal of said front wall being cut and bent to provide an integral spring which is above said pivotal axis and which extends rearwardly from said front wall and engages the front face of the grip portion of the pistol for biasing said member for forward pivotal movement.

4. The combination as set forth in claim 3, wherein a stop is provided which is integral with said front wall and which extends rearwardly below said pivotal axis and engages the front face of said grip portion for limiting forward pivotal movement of said member.

5. A detachable trigger operating attachment separate from, and adapted to be attached to, a pistol having a hollow grip portion with a pair of parallel side walls integrally connected by a front wall, and a rearwardly movable trigger; said attachment comprising: a detachable yoke member having a pair of parallel spaced flanges each secured in fixed position to the outside of one of said side walls, and extending beyond said front wall; a trigger operating member, pivotally mounted on the extended portion of said yoke member, in front of said front wall and in generally parallel spaced relation thereto; said operating member having near its free end a lug portion which slidably engages the front concave surface of said trigger; said operating member being in the form of a resilient sheet metal channel with a pair of rearwardly-extending parallel flanges, integrally connected by a front web member slotted to form an integral tongue bent rearwardly to contact said front wall, said tongue constituting a spring whereby said operating member is biased for pivotal movement in the forward direction; each of said last-mentioned flanges slidably contacting the outer surface of one of said side walls so as to be readily grasped by a mittened hand, embracing said grip portion; whereby said trigger is actuated to discharge said pistol when said operating member is squeezed by said hand.

6. A detachable trigger operating attachment separate from, and adapted to be attached to, a pistol having a hollow grip portion with a pair of parallel side walls integrally connected by a front wall, and a rearwardly movable trigger; said attachment comprising: a detachable yoke member having a pair of parallel spaced flanges each secured in fixed position to the outside of one of said side walls, and extending beyond said front wall; a trigger operating member, pivotally mounted on the extended portion of said yoke member, in front of said front wall and in generally parallel spaced relation thereto; said operating member having near its free end a lug portion which slidably engages the front concave surface of said trigger; said operating member being in the form of a resilient sheet metal channel with a pair of rearwardly-extending parallel flanges, integrally connected by a front web member, each of said last-mentioned flanges slidably contacting the outer surface of one of said side walls so as to be readily grasped by a mittened hand, embracing said grip portion; said operating member having a notch to provide clearance for the lower portion of a triggger guard of said pistol, the lug portion of said operating member being above said notch and engageable with said trigger, and the front of said operating member being exposed for engagement by the fingers of said hand; whereby said trigger is actuated to discharge said pistol when said operating member is squeezed by said hand.

7. In combination with a pistol having a hollow grip portion with a pair of parallel side walls integrally connected by a front wall and a rearwardly movable trigger, a detachable trigger operating attachment separate from, and adapted to be attached to said pistol, comprising: a detachable yoke member having a pair of parallel spaced flanges, each secured in fixed position to the outside of one of said side walls, and extending beyond said front wall; a trigger operating member, pivotally mounted on the extended portion of said yoke member, in front of said front wall and in generally parallel spaced relation thereto; said operating member having near its free end a lug portion which slidably engages the front concave surface of said trigger; said operating member being in the form of a resilient sheet metal channel with a pair of rearwardly-extending parallel flanges, integrally connected by a front web member slotted to form an integral tongue which is bent rearwardly to contact said front wall, said tongue constituting a spring whereby said operating member is biased for pivotal movement in the forward direction; each of said last-mentioned flanges slidably contacting the outer surface of one of said side walls so as to be readily grasped by a mittened hand, embracing said grip portion; whereby said trigger is actuated to discharge said pistol when said operating member is squeezed by said hand.

8. In combination with a pistol having a hollow grip portion with a pair of parallel side walls integrally connected by a front wall, a rearwardly movable trigger, and a trigger guard; a detachable trigger operating attachment separate from, and adapted to be attached to said pistol, comprising: a detachable yoke member having a pair of parallel spaced flanges, each secured in fixed position to the outside of one of said side walls, and extending beyond said front wall; a trigger operating member pivotally mounted on the extended portion of said yoke member, in front of said front wall and in generally parallel spaced relation thereto; said operating member having near its free end a lug portion which slidably engages the front concave surface of said trigger; said operating member being in the form of a resilient sheet metal channel with a pair of rearwardly-extending parallel flanges, integrally connected by a front web member, each of said last-mentioned flanges slidably contacting the outer surface of one of said side walls so as to be readily grasped by a mittened hand; said operating member having a notch to provide clearance for the lower portion of said trigger guard, the lug portion of said operating member being above said notch and engageable with said trigger, and the front of said operating member being exposed for engagement by the fingers of said hand; whereby said operating member is movable rearwardly to cause said trigger to discharge said pistol when squeezed by said hand; embracing said grip portion.

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