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E. M. HARVEY
BUTT PLATE ASSEMBLY
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Fig. 1.

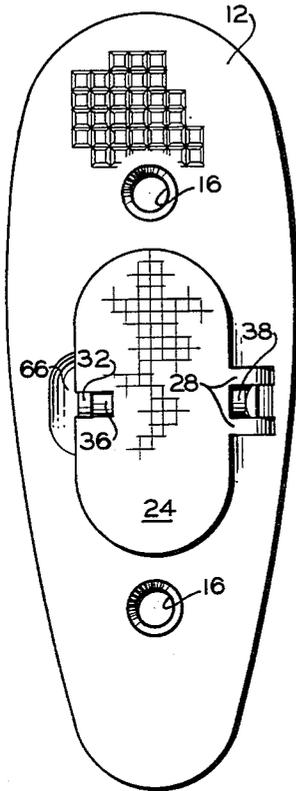


Fig. 2.

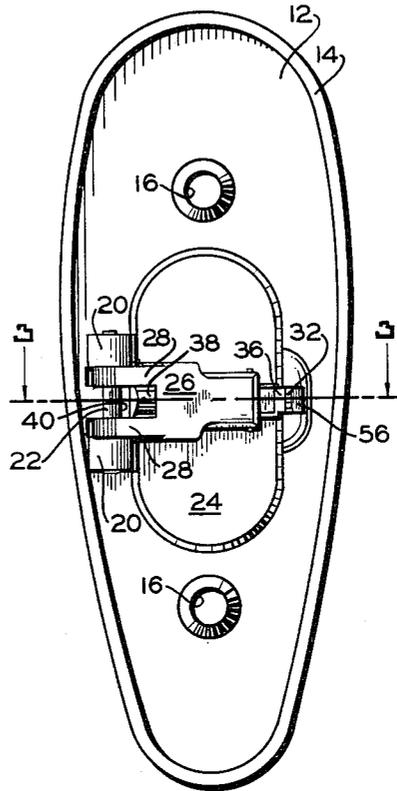


Fig. 3.

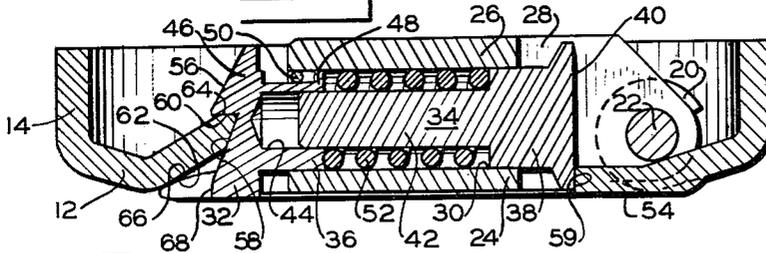
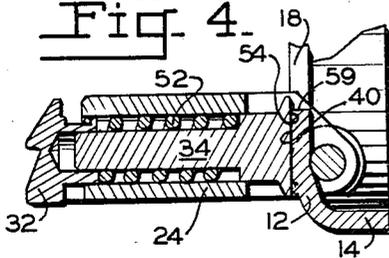


Fig. 4.



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BUTT PLATE ASSEMBLY

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3 Claims. (Cl. 42—71)

(Granted under Title 35, U. S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the Government for governmental purposes without the payment of any royalty thereon.

My invention relates to a butt plate assembly for a firearm having a compartment recessed in the gunstock thereof, including a butt plate for covering the compartment having a door hinged thereon for covering an access hole in the butt plate. More particularly, my invention relates to such an assembly in which the door is adapted to be positively secured in the closed position thereof and to be released for access to the compartment, without the use of special tools. In addition, the door is adapted to be resiliently secured in the open position thereof.

The butt plate assembly in present use includes a butt plate adapted for attachment to the gunstock of a firearm and provided with a hole for communicating into the cleaning instrument compartment of the gunstock. A door of similar material hinged to the butt plate is selectively spring-biased to a closed position covering the hole or to an open position to allow access to the compartment. This assembly is adequate to retain within the compartment the cleaning implements of the firearm for which it was designed, even during firing of the firearm. However, the recoil forces of modern firearms have been increased and the cleaning implements have necessarily become heavier, so that recoil of the firearms causes the implements to be projected rearwardly. Impact of the implements upon the door often causes such a door to open and the implements to be thrown from the firearm.

The access door biasing spring of the present type of butt plate could be strengthened to retain the door in closed position despite the impact of the cleaning implements, but special tools would then be required to open the door. It was found that butt plate doors provided with transverse spring-biased latches eventually opened due to recoil vibrations of an automatic weapon, unless the latches were disposed to slide laterally with respect to the weapon.

An object of my invention therefore is to provide a butt plate for covering the cleaning instrument compartment of a gunstock, including an access door and a device for positively locking the door against opening responsive to recoil impacts of implements in the compartment.

Another object of my invention is to provide a firearm butt plate including a pivoted access door and a device adapted for positively securing the door in closed position and for releasing the door without the aid of special tools.

A further object of my invention is to provide a firearm butt plate having a door spring-biased to open position and a device adapted for positively retaining the door in closed position and for releasing the door, without the use of special tools.

An additional object of my invention is to supply a firearm butt plate having a device adapted for positively locking the access door in the closed position thereof and for releasing the door responsive to application thereto of

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pressure from an implement such as a cartridge of the firearm. A still further object of my invention is to provide the spring-biased butt plate with a positive lock having a laterally slidable bolt.

According to my invention a butt plate assembly having means for attachment to the gunstock of a firearm is provided for covering the cleaning instrument compartment of the gunstock. A door hinged on the butt plate covers a hole in the plate provided for access to the compartment.

The assembly includes a stop for retaining the door in open position and a laterally slidable latch for positively securing the door in the closed position oppositely spring-biased and projecting from the door. The device is adapted to release the door from closed position responsive to a force applied thereon by a pointed implement such as a cartridge of the firearm.

For a more complete understanding of my invention reference is directed to the drawing, in which:

Fig. 1 is a rear elevational view of one embodiment of my invention;

Fig. 2 is a front elevational view of the butt plate assembly of Fig. 1;

Fig. 3 is an enlarged sectional view along line 3—3 of Fig. 2; and,

Fig. 4 is a partial sectional view similar to Fig. 3 with the door in open position.

According to the drawing, a butt plate assembly, formed to enclose the butt end of a firearm gunstock (not shown) includes a butt plate 12 having a peripheral apron 14. Plate 12 is provided with screw holes 16 for attachment to the gunstock, and a hole 18 for access into the cleaning instrument compartment of the gunstock. Extensions 20 of plate 12 are formed into loops to secure hinge pin 22 therebetween.

Door 24 includes mounting member 26 having bifurcations 28 and cylindrical aperture 30 therethrough. Hinge pin 22 extends through bifurcations 28 to pivot door 24 between an open position and a closed position covering access hole 18.

Mounting member 26 is provided with latch 32 and stop 34, respectively, having portions 36 and 38 slidable in aperture 30. Aperture 30 is lateral with respect to the gunstock in the closed position of door 24. Slidable portion 38 projects between bifurcations 28. Stop 34 is symmetrically formed with an end surface 40 perpendicular to the principal axis thereof. Guide piston 42 included on stop 34 is slidably disposed in cylindrical recess 44 of latch 32. Shoulders 46 and 48 of latch 32 are respectively engageable with mounting member 26 and pin 50 secured therein to limit movement of the latch. Spring 52 encloses piston 42 and extends between slidable portions 36 and 38 oppositely to bias latch 32 and stop 34.

In the open position of door 24 shown in Fig. 4 shoulder 48 engages pin 50 and stop 34 is biased to bring end surface 46 into engagement with outer surface 54 of butt plate 12, resiliently to retain door 24 in the open position.

Latch 32 and butt plate 12, respectively, are provided with corresponding slide surfaces 56 and 58 for wedge action therebetween to cause latch 32 to compress spring 52 as door 24 is pressed towards the closed position thereof. As the door closes, end surface 40 rounds the edge of access hole 18 to contact peripheral surface 59 of access hole 18 in the fully closed position.

Also, when door 24 is closed, lock surface 60 of latch 32 and bevel surface 62 of door 24, respectively, engage hold surface 64 and bevel surface 66 of butt plate 12 positively to retain door 24 in the closed position.

Face 68 of latch 32 is spaced from bevel surface 66 to allow the point of an implement such as the projectile end of a cartridge of the firearm to be inserted therebetween. In the closed position of door 24, latch 32 is responsive

to a force thereon applied by means of the implement to compress spring 52 and release door 24 from the closed position.

The assembly described fulfills all of the objects outlined above, since the apparatus is simple and inexpensive, the door of the assembly is positively secured in the closed position thereof and may be released without the use of special tools.

While the foregoing is a description of the preferred embodiment, I intend in the following claims to include those modifications and variations that are within the spirit and scope of my invention.

I claim:

1. A butt plate assembly for attachment to a gunstock having a recessed butt compartment, comprising a plate for covering the butt having a hole therethrough for communicating with the compartment, a door pivoted on said plate between an open and a closed position covering said hole and provided with an aperture in axial relation with the gunstock in said closed position, a latch and a stop laterally slidable in said aperture and oppositely projecting therefrom, a biasing spring disposed in said aperture between said latch and said stop, said latch being adapted for limited movement with respect to said door and provided with a lock surface and said stop having a bearing surface for engagement with the outer surface of said plate to retain said door in said open position, said butt plate and said latch including slide surfaces for cooperative wedge action during closing of said door to compress said spring, said lock surface and said bearing surface being respectively adapted to engage said butt plate and to engage the plate surface enclosing said hole in said closed position positively to secure said door responsive to said spring and said latch being responsive to a force thereon against said spring for disengagement from said plate to permit said door to open.

2. A butt plate assembly for attachment to a gunstock having a recessed butt compartment, comprising a plate for covering the butt having a hole therethrough, a door pivoted on said plate for operation between a closed position covering said hole and an open position to allow access to said compartment, said door including a mounting portion having a cylindrical aperture therethrough

disposed for axial relation with the gunstock in said closed position, a latch and a stop laterally slidable in said aperture to oppositely extend from said mounting portion and a spring disposed in said aperture oppositely to bias said latch and said stop, said latch having thereon a pair of shoulders engageable with said mounting portion for limited movement of said latch with respect to said mounting portion and including a lock surface, and said stop having a bearing surface for selective engagement with the outer surface of said butt plate for retaining said door in said open position, said butt plate and said latch having cooperating slide surfaces for wedge action therebetween to compress said spring responsive to closing of said door, said lock and said bearing surfaces being respectively adapted for engaging said butt plate and the enclosing surface of said hole positively to retain said door in said closed position responsive to said spring and said latch being responsive to a force thereon against said spring to release said door.

3. In an assembly for covering the gunstock compartment of a weapon including a plate having a hole for access into the compartment and a door disposed on the plate for rotation to a closed position covering the hole and provided with an aperture laterally disposed with respect to the weapon in the closed position, means for positioning said door comprising a latch and a stop slidably disposed in the aperture to oppositely extend from the door, a spring disposed therebetween, and means for limiting movement of said latch in the aperture, said latch having a groove therein and said stop having a flat surface thereon for cooperative engagement with the surfaces of the plate bordering the hole to resiliently retain the door in the closed position and in a predetermined open position thereof.

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