Dec. 7, 1948. O. E. ROSENGREN 2,455,608

BARREL LOCK

Filed Aug. 31, 1945

Fig. 1.

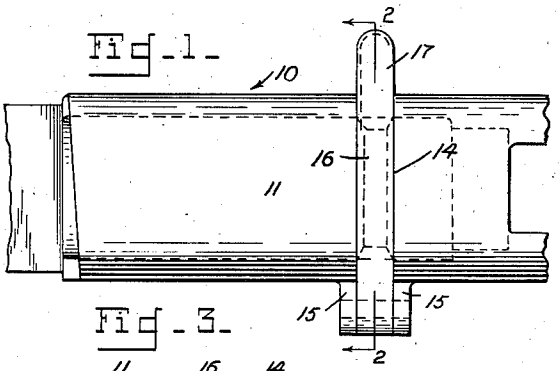


Fig. 2.

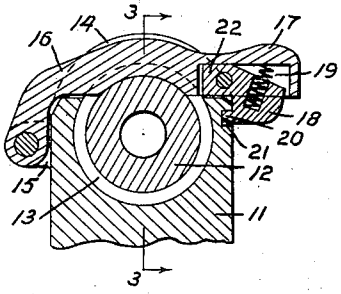


Fig. 3.

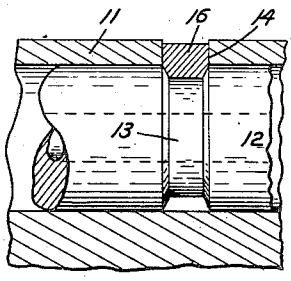


Fig. 6.

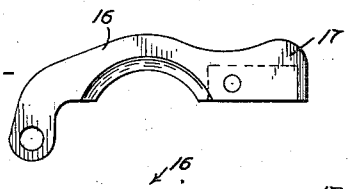


Fig. 7.

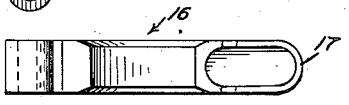


Fig. 4.

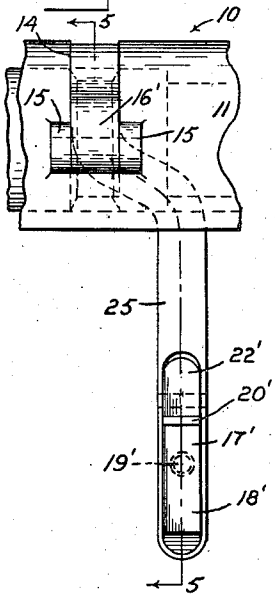


Fig. 5.

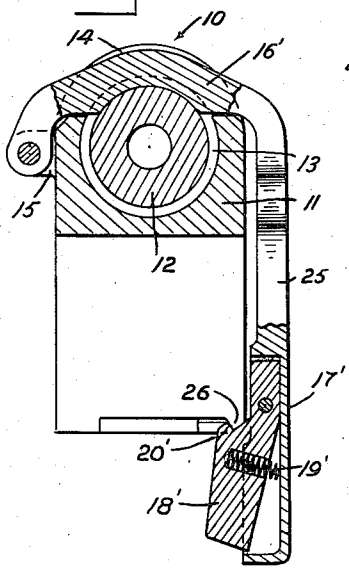


Fig. 8.

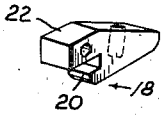
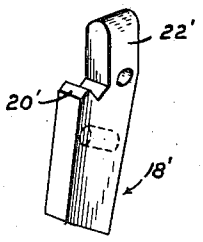


Fig. 9.



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BARREL LOCK

Orvar E. Rosengren, Hamden, Conn.

Application August 31, 1945, Serial No. 613,867

2 Claims. (Cl. 42—75)

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The invention relates to barrel locks for the barrels of machine guns, and its object is to present a lock which may be quickly operated in the field, to release a hot barrel and enable its replacement quickly by a cool barrel, in accordance with recent practice wherein such procedure has been found preferable to the use of water cooling, especially for infantry operating in rough terrain. It is an object of the invention to avoid complicated and delicate construction of the locking parts so as to minimize the liability of impairment of the device by accumulation of dirt incident to rough handling of weapons in the field. It is also an aim to avoid adding appreciably to the weight of a weapon by the incorporation of my device.

Additional objects, advantages and features of invention reside in the construction arrangement and combination of parts involved in the embodiment of the invention as will be described or will be understood in the following description and accompanying drawings, wherein:

Figure 1 is a fragmentary top view of a weapon in which my invention has been incorporated;

Figure 2 is a cross section on the line 2—2 of Figure 1;

Figure 3 is a longitudinal section on the line 3—3 of Figure 2;

Figure 4 is a side view of a modification;

Figure 5 is a section on the line 5—5 of Figure 4;

Figure 6 is a side view of the strap lock;

Figure 7 is a bottom view of the strap lock;

Figure 8 is a perspective detail of the latch piece 18.

Figure 9 is a detail perspective of the latch piece 18'.

Referring more particularly to the drawings there is illustrated a portion of a receiver 10, including a sleeve portion 11 suitably bored to receive a barrel 12 slidably therein, the barrel having a circumscribing wedge shaped channel 13 the sides of which are divergent radially so that the groove is wider at the top than at the bottom. Any suitable means may be provided for stopping the barrel at proper operative position when inserted in the sleeve 11, which means is not illustrated since it comprises no novel part of the present invention. Formed in the receiver sleeve 11 in position to align with the channel 13 when the barrel is emplaced, there is a slot 14 extending transversally across the top of the receiver and stopping on each side at a level slightly above the axis of the barrel. At one side of the receiver, pivot ears 15 are formed on

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the receiver adjacent respective sides of the slot 14, located below the slot, and pivoted between these ears there is a strap lock 16 consisting of a lever suitably shaped to extend upwardly beside the receiver and across the latter in the slot 14 of the right hand side, where a handle 17 is formed integrally thereon, which projects laterally from the receiver a short distance. The medial portion of the strap member is curved to fit the barrel and shaped at its under side to fit the channel 13 so as to wedge slightly therein when the handle is lowered to engagement with the receiver. Its upper part fits snugly between the sides of the slot 14. The under side of the handle 17 is recessed, and has a latch 18 pivoted therein at the inner end part of the recess adjacent the barrel, and extending outwardly to near the end of the handle, the upper side of the latch being bored to hold a compression spring 19 against the handle so that the spring presses the latch downwardly. Adjacent the side of the receiver, the latch is extended downwardly below the handle and has an inwardly extended bill 20 arranged to engage snugly in a keeper recess 21 formed in the side of the receiver, so as to hold the strap in place snugly upon an engaged barrel. The bill is bevelled on the lower inner side and the latch has an inner heel portion 22 to limit downward movement of the latch by the spring so that this device may be moved to, and caught in engaged position by simple downward pressure on the handle 17, the bevelled portion of the latch bill engaging the junction of the top face and side of the receiver and thereby serving to cam the latch outward in such closing movement of the strap. The relation of the upper side of the recess 21 and of the bill 20 is such that the latter bears upwardly against the upper side of the recess at latched position of the parts.

In the use of the device, the strap is disengaged by grasping and pressing together the handle 17 and latch 18 by the thumb and forefinger, and raising and swinging the strap to the left hand side of the receiver, after which a barrel may be withdrawn longitudinally, and a new one inserted similarly with its channel 13 under the slot 14. The inserted barrel may then be secured by flipping the strap over and downward toward the right side of the arm and pressing it to latched position.

In Figures 4 and 5, the construction of the receiver is the same as before described, excepting that the keeper recess 21 is not required, and the strap member 16' is also the same as that

before described with the exception that instead of the short handle 17, an elongated handle 25 is provided, which, in the latched position of the device extends downwardly in slightly spaced relation to the side of the receiver, and is recessed and provided with a latch device the same as that before described, the parts of which have the same reference characters applied thereto as used on the first described latch, with the addition of a prime mark. This latch 18' may catch under a low keeper part 26 on the under side of the receiver, or other pieces of the gun, the length of the handle 25 being of appropriate length for this purpose. In the latch device of Figures 4 and 5 the latch parts may be elongated considerably, so that a latch spring of greater strength may be employed, and at the same time its manual release facilitated.

I have disclosed my invention with particularity in the best form in which it has been constructed, and perfected by me, but it will be understood that this is purely exemplary and that various changes in structure and arrangement, substitutions of materials and equivalents, mechanical or otherwise, may be made without departing from the spirit of the invention particularly set forth in the appended claims, wherein:

1. In a gun, a barrel having an exterior circumferential groove extending completely around said barrel near the breech end thereof, a receiver having a chamber within which the part of said barrel having the said circumferential groove fits, said receiver having a slot transversely across the top thereof and so positioned as to register with said groove when the barrel is fitted with said chamber, a strap adapted to fit within said slot and groove when they register with each other, said strap at one end being pivoted to said receiver adjacent one end of said slot, a latching means at the other end of said strap, and means on said receiver near the other end of said slot with which said latch coacts to secure said strap in locked position in said groove and slot.

2. In a gun, a barrel having an annulus around and adjacent the breech end thereof, a receiver having a chamber within which the part of said barrel having said annulus fits, said receiver having a recess transversely across the top thereof and so positioned as to register with said annulus when the barrel is fitted in said chamber, an arcuate arm adapted to fit within said annulus and recess when they register with each other, said arcuate arm at one end being pivoted to said receiver adjacent one end of said recess, a latching means at the other end of said arcuate arm, and means on said receiver near the other end of said recess with which said latch coacts to secure said arcuate arm in locked position in said annulus and recess.

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