

Sept. 28, 1943.

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2,330,637

RETRACTIBLE BAYONET

Filed July 13, 1942

2 Sheets-Sheet 1

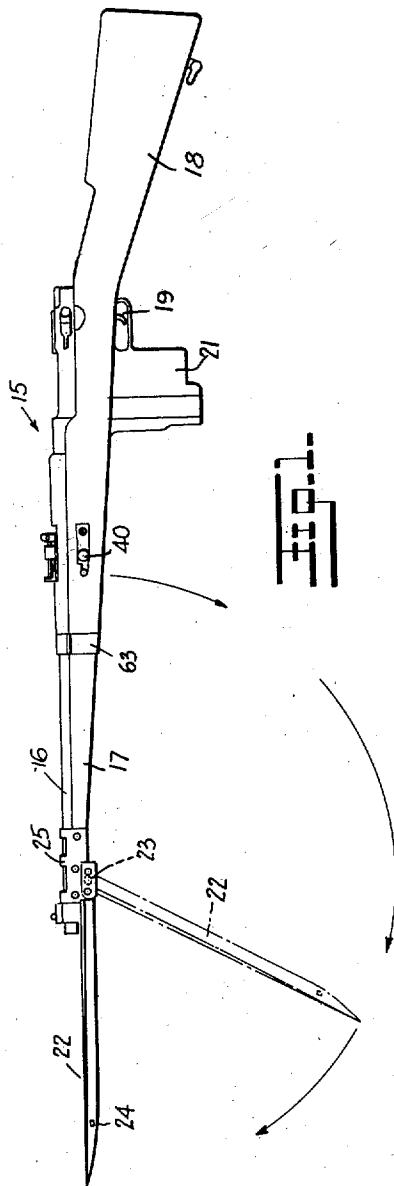


Fig. 1-

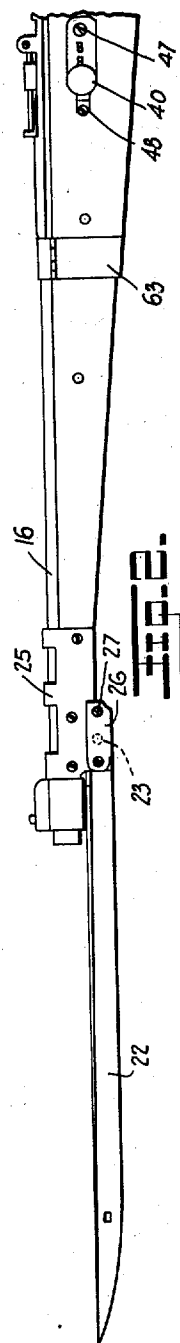


Fig. 2-

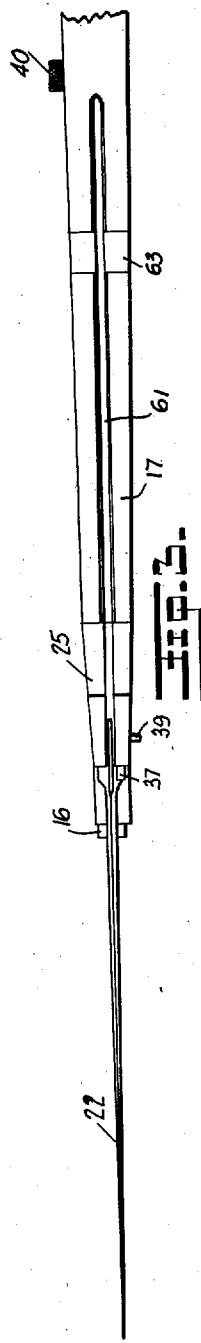


Fig. 3-

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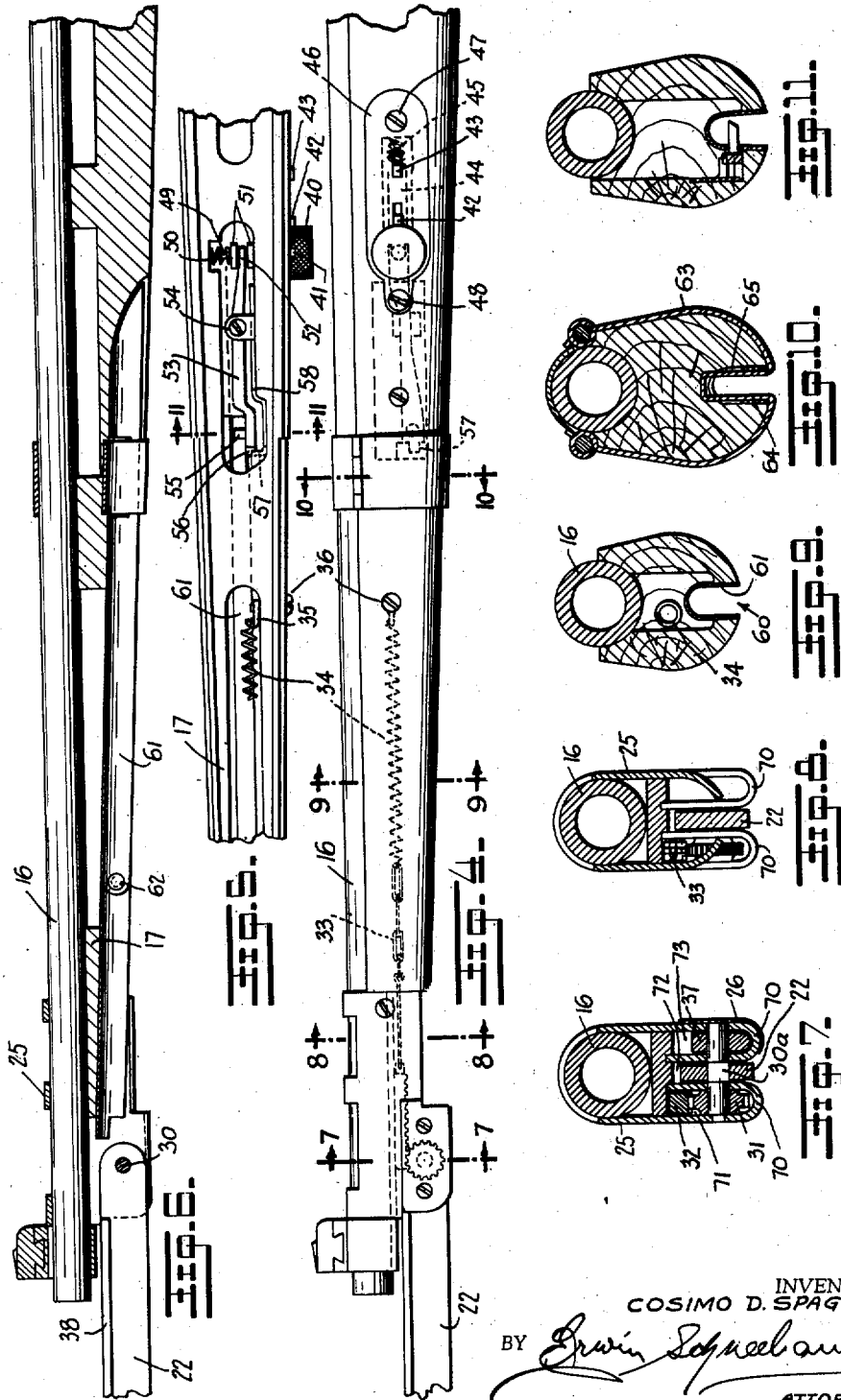
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2 Sheets-Sheet 2



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2,330,637

RETRACTABLE BAYONET

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Application July 13, 1942, Serial No. 450,658

2 Claims. (Cl. 42—86)

This invention relates to bayonets and more particularly to a combination rifle and bayonet, wherein the bayonet is permanently attached to the rifle, and is adapted to be automatically extended into "fixed" position or retracted into inoperative position as may be desired.

It is the principal object of this invention to provide a combination rifle and bayonet and means provided in a stock of the rifle for automatically extending the bayonet into extended or "fixed" position.

A further advantage of this invention resides in the provision of locking means for the bayonet, whereby it is securely and firmly locked in extended position.

Still another aim of this invention is to provide means associated with the locking retaining means, whereby the bayonet is prevented from inadvertently becoming disengaged from its extended position, said retaining means being manually operable to release the bayonet when it is desired to return it to inoperative position.

Yet another object of the present invention resides in the provision of means on the underside of the fore-stock of a rifle for housing the bayonet when in unfixed or inoperative position, the housing means also serving as protection of the sharp longitudinal edge of the bayonet.

And it is yet another purpose of this invention to provide a bayonet which is swingingly fulcrumed at its shank or rear end to the muzzle of a rifle and a spring-controlled gear for extending the bayonet into "fixed" position.

These and other meritorious objects and advantages, which will become more fully apparent as the description hereof proceeds, are achieved by the novel construction, combination, and arrangement of few and simple parts, hereinafter described and illustrated in the accompanying drawings, forming a material component of this disclosure, and in which:

Figure 1 is a side elevational view of a combination rifle and automatic bayonet constructed in accordance with the present invention and showing the bayonet in "fixed" position.

Figure 2 is a view of a portion of the stock or a rifle and the muzzle, showing the bayonet and operating mechanism drawn to an enlarged scale.

Figure 3 is a bottom view of Figure 2.

Figure 4 is another enlarged view, this being a side elevation of the muzzle and fore-stock of a rifle showing a portion of the bayonet extended and also showing the operating mechanism.

Figure 5 is a top view of a portion of Figure 4, with the fore-stock removed.

Figure 6 is a center section through the rifle portion shown in Figure 4.

Figure 7 is a sectional view, the section being taken on line 7—7 of Figure 4.

Figure 8 is a sectional view, the section being taken on line 8—8 of Figure 4.

Figure 9 is a sectional view, the section being taken on line 9—9 of Figure 4.

Figure 10 is a sectional view, the section being taken on line 10—10 of Figure 4; and

Figure 11 is a sectional view, the section being taken on line 11—11 of Figure 5.

Referring in greater detail to the drawings, numeral 15 indicates in general a rifle having a barrel or muzzle 16, a fore-stock 17, rear or shoulder part 18, trigger 19 and bullet magazine 21. None of these elements form a part of this invention, hence none are here more fully described.

Near the rifle sight there is provided a metal clamp strap 25 having at its under side a cover plate 26 which is permanently secured to the clamp strap 25 by screws 27 or other suitable means.

Bayonet 22 is fulcrumed at its rear or shank to the center of cover plate 26 by fulcrum shaft 30 in such manner that the sharp edge or blade of the bayonet 22 will face downwardly when the bayonet is extended, as illustrated in Figure 1. Near its pointed tip, bayonet 22 is provided with an opening 24 for a purpose which will presently be described. At its center, fulcrum shaft 30 is provided with a square portion 30a which acts as seat for bayonet 22. Within cover plate 26 is a gear 31 and gear rack 32. A plurality of links 33 are provided in the stock and a spring 34 is provided, one of its ends being secured to the outermost of said links 33, the other end of the spring being attached to a spring securing hook 35 by means of screw 36 or in any other desirable manner. To securely retain the bayonet in extended position, there is provided a latch 37 engaging key portion 38 of the bayonet 22, and knob 39 permits manual retraction of latch 37.

The mechanism for retaining the bayonet in unfixed or inoperative position consists of the following: The stock of the rifle is provided with a screw head 40 having a notch 41 to engage latch 42 which is manually operated by finger knob 43. Latch 42 and knob 43 are part of a plate 44 which is retained in locking position by spring 45. All of these several elements are positioned behind plate 46 which is held in its place on the stock of a rifle by screws 47—48 or in any other suitable

manner, as illustrated in Figure 4 of the drawings. Screw head 40 has a pin 49 about which is wound spring 50, and is also provided with collars 51 between which is engaged fork 52 which constitutes part of lever 53 fulcrumed as at 54 and having at its outer end a pin 55 which is adapted to engage opening 24 in bayonet 22 when the bayonet is in inoperative position. At 56 arm 53 is provided with sliding means adapted to slide in channel 57 of bracket 58 which bracket also carries fulcrum 54 previously referred to. At its under side, stock 17 is provided with a groove 60 which may contain a channel-shaped metal lining 61. Lining 61 may be hinged as at 62. A hinged clamping member 63 is provided to clamp muzzle 16 to stock 17. At its under side, clamping ring 63 has a channel portion 64 which clamps channel lining 61 as at 65.

Metal clamp strap 25, to which reference has been had previously, has its lower ends bent inwardly as indicated at 70 thereby forming three compartments 71, 72 and 73 respectively. Compartment 71 is adapted to contain gear 31 and gear rack 32, compartment 72 is adapted to contain seat 30a and bayonet 22 which is secured thereto and compartment 73 is adapted to contain the spring controlled latch 37.

In operation, when the bayonet is in unfixed or inoperative position, the bayonet will rest in groove 60, the groove being of sufficient depth to render the bayonet almost flush with the stock of the rifle. Pin 55 will have entered opening 24 in bayonet 22 and latch 42 will be engaged in notch 41 of screw head 40.

When it is desired to swing the bayonet into operative or "fixed" position, latch 42 is manually withdrawn from notch 41 and the knob 43 turned. Withdrawing of the latch will cause pin 55 to become disengaged from opening 24 in bayonet 22. Bayonet 22 is then manually swung into extended position, which will be facilitated by the action of spring 34 which will pull against gear rack 32 causing bayonet 22 to become extended. When the bayonet is in an outstretched position, latch 37 will be caused to engage key portion 33 of the bayonet, to hold the latter securely in place. When the bayonet is to be retracted, the reverse of the procedure here described is used.

Thus it will be seen that there has been illustrated and described an automatic bayonet in the preferred form of its construction. However, the disclosure is to be regarded as illustrative and descriptive only and not as limitative or restrictive to the exact details shown, and applicant reserves the right to make such minor changes and modifications in the construction of this invention as may come within the terms of the appended claims without thereby departing from the spirit of the present invention.

Having thus described the invention, what is claimed as new and desired to secure by Letters Patent is:

1. In combination with a rifle having a muzzle and a stock, a clamping ring about said muzzle, a cover plate, means securing said cover plate to said clamping ring, a bayonet, means swingingly securing said bayonet to said cover plate, means terminating within said cover plate normally urging said bayonet into extended position, locking means on said cover plate to releasably retain said bayonet in extended position, manual means to release said locking means to retract said bayonet, said bayonet provided with an opening near the point thereof, and retaining means in the stock of said rifle entering said opening to lock said bayonet in inoperative position.

2. In combination with a rifle having a muzzle and a stock, an arcuate clamping ring, said clamping ring secured about said muzzle, said clamping ring bent inwardly at the ends thereof forming three compartments, a bayonet, a cover plate, means securing said cover plate to said clamping ring, means swingingly securing said bayonet to said cover plate, a fulcrum shaft passing through said cover plate and said compartments, said shaft formed at its center with a substantially square portion on which said bayonet seats, said square portion occupying the second of said compartments, a gear, said gear occupying the first of said compartments, a spring pulled gear rack in engagement with said gear, and means for retaining said bayonet in retracted position and for releasing said bayonet to be extended into "fixed" position.

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