April 18, 1967 E. M. HARVEY 3,314,182

DUAL MAGAZINE SYSTEM FOR FIREARMS

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Fig. 1

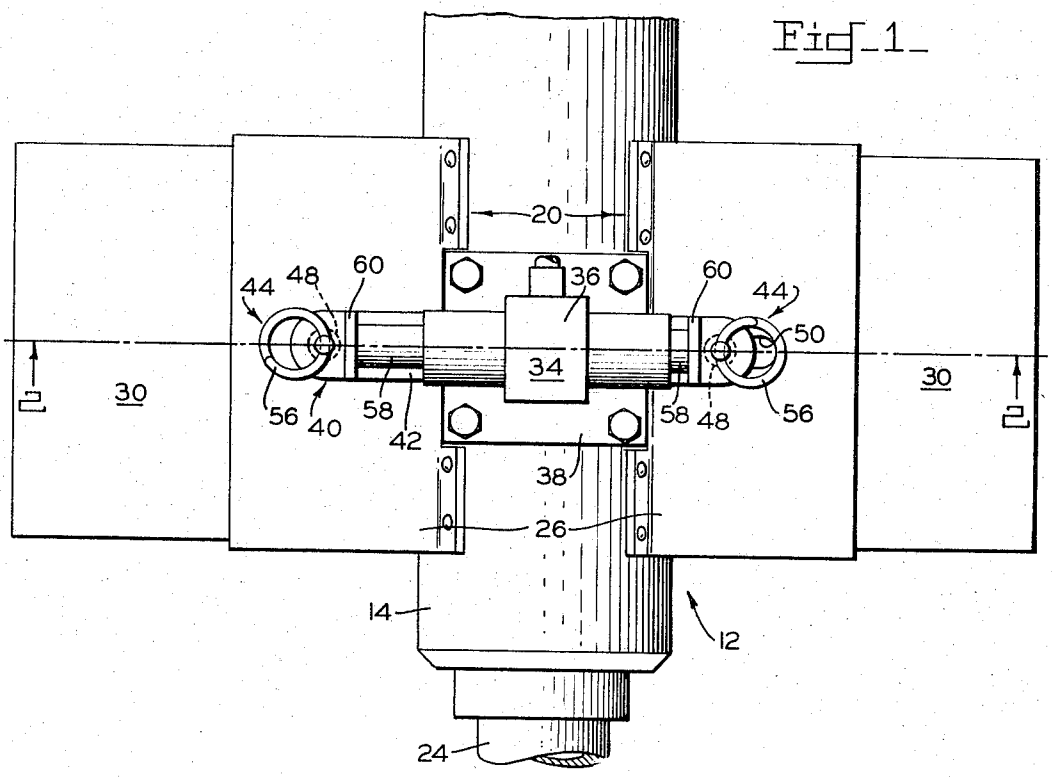
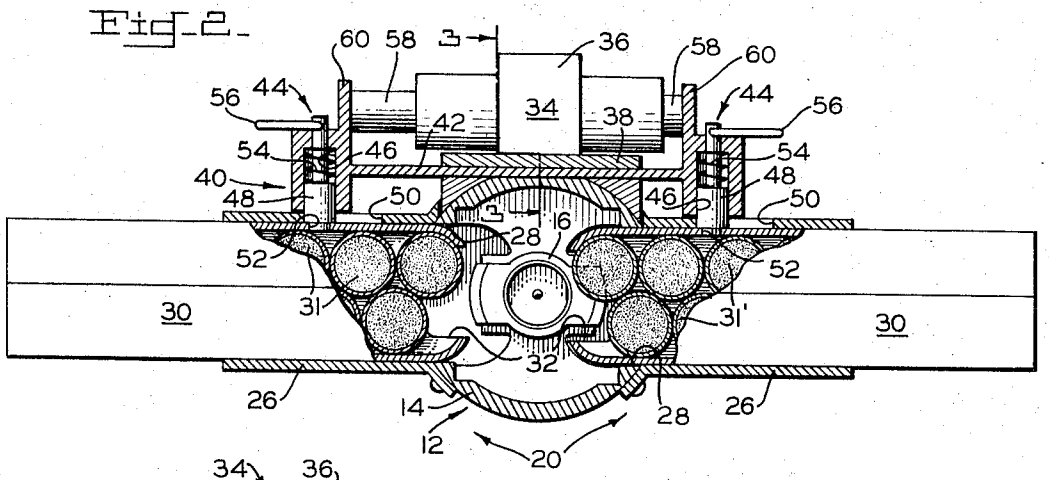


Fig. 2



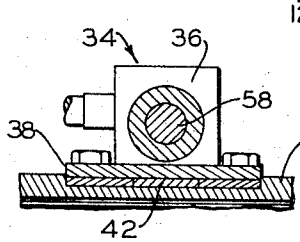


Fig. 3

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Fig. 4

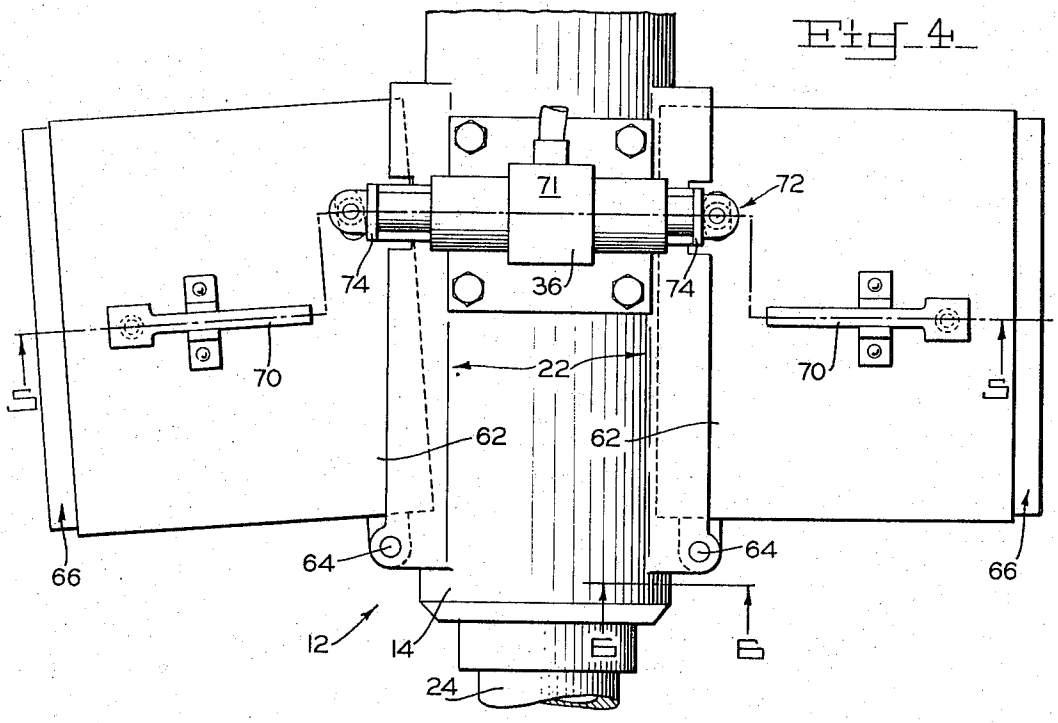
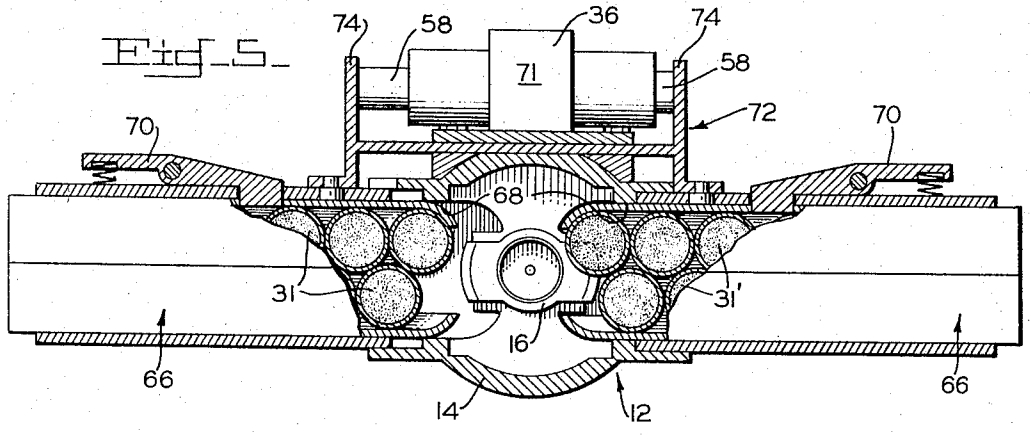


Fig. 5



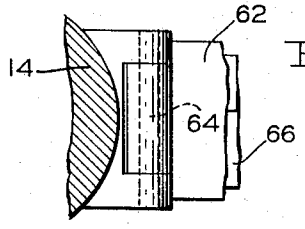


Fig. 6

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United States Patent Office 3,314,182
Patented Apr. 18, 1967

3,314,182

DUAL MAGAZINE SYSTEM FOR FIREARMS

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Filed Oct. 11, 1965, Ser. No. 494,989
4 Claims. (Cl. 42—18)

ABSTRACT OF THE DISCLOSURE

This invention provides for firearms a dual magazine system which consists of two magazines each capable of holding a supply of cartridges having a different military characteristic than those in the other. Each of the magazines is separately mounted on the firearm receiver, and arranged so as to be displaceable thereon between a feeding position wherein the leading cartridge therein is removable by the reciprocating bolt of the firearm and a reserve position wherein the leading cartridge is free from contact by the bolt. A switch device links the two magazines so that when one is displaced to its feeding position the other is simultaneously displaced to its reserve position. The switch device is actuatable either manually or by an electric solenoid.

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

This invention relates to firearms which are fed with cartridges from a magazine and it pertains more particularly to the magazine feeding devices thereof.

In modern ordnance it is desirable to have the weapons adaptable to as many different military requirements as possible. It is therefore the object of this invention to provide, for machine guns and shoulder arms which are fed with cartridges from a magazine, a magazine mechanism consisting of two magazines, each capable of holding cartridges of different military characteristics, and a device for displacing the magazines to and from their respective feeding positions so that selective feeding of two different types of cartridges may be easily and quickly effected.

Although a particular embodiment of the invention has been described in detail herein, it is evident that many variations may be devised within the spirit and scope thereof and the following claims are intended to include such variations:

FIG. 1 is a top view showing one embodiment of the invention mounted on a machine gun;

FIG. 2 is a view taken along line 2—2 of FIG. 1;

FIG. 3 is a view taken along line line 3—3 of FIG. 2;

FIG. 4 is a view similar to FIG. 1 but showing another embodiment of the invention;

FIG. 5 is a view taken along line 5—5 of FIG. 4; and

FIG. 6 is a view taken along line 6—6 of FIG. 4.

Shown in the figures is a machine gun 12 having a receiver 14 with a bolt 16 slidingly mounted therein for longitudinal reciprocation between a recoil and a battery position. During its forward stroke to the battery position, bolt 16 engagably transfers a cartridge from a magazine device shown at 20 in FIG. 1 and at 22 in FIG. 4 to the chamber of a barrel 24 for discharge.

Referring to FIGS. 1–3, magazine device 20 includes a pair of magazine holders 26 which extend outwardly from opposite sides of receiver 14 and which have interior communication with the inside of the receiver by means of openings 28 therein. Each of the holders 26 is open at the outer end to slidingly receive a magazine 30 for holding a plurality of cartridges 31, or cartridges 31' of different military characteristics, which are spring pressed by known means to a leading position in a mouth 32 of the magazine.

A magazine 30 is received by each of the holders 26 for sliding displacement between a feeding position, wherein the leading cartridge 31 or 31' is contactable by bolt 16 during its forward stroke to battery position for transfer to barrel 24, and a reserve position, wherein the leading cartridge is positioned away from contact by the bolt. Magazines 30 are displaceable between the feeding and reserve positions by a switch device 34 which is actuatable either manually or by an electric solenoid 36 and is arranged so that when one of the magazines is displaced to its feeding position the other is simultaneously displaced to its reserve position.

Switch device 34 includes a mount 38 fixed on receiver 14 and an actuator 40 supported by the mount for sliding lateral displacement respective to the receiver. Actuator 40 includes a bar 42 which extends through mount 38 and a pair of latches 44 integrally formed on opposite ends of the bar. Each of the latches 44 includes a vertically disposed bore 46 which slidingly receives a plunger 48. Each of the plungers 48 is extendable from the bottom end of its respective bore 46 so as to be insertable through a laterally elongated slot 50 in the respective one of the holders 26 for reception by a mating recess 52 in the related magazine 30. Thus, magazines 30 are releasably latched to bar 42 for displacement thereby between the feeding and reserve positions with such displacement being permitted by the elongation of slots 50.

Plungers 48 are each pressed downwardly for secure engagement with recess 52 in the related magazine 30 by a spring 54. A ring 56 is fixed to an upwardly extending end of each of the plungers 48 to provide for manual disengagement thereof to release the magazines 30 for replacement. Solenoid 36 includes a laterally disposed shaft 58 which is selectively displaced in opposing directions when the solenoid is energized and which has extending ends that contact cooperating arms 60 on bar 42 so that displacement of the shaft is transferred thereto.

Thus, a magazine 30 is installed in one of the holders 26 by pulling outwardly on the related ring 56 and inserting the magazine into the holder until plunger 48, when released, is received by the related recess 52. Then, by selectively energizing solenoid 36, the magazines 30 are positionable so that cartridge 31 or 31' may be quickly and easily selected by an operator for firing.

Referring to FIGS. 4–6, magazine device 22 includes a pair of magazine holders 62 which are hingedly mounted at 64 at the front-inner corners thereof to receiver 14 so that the rear-inner corner is pivotal in a lateral plane, respective to the receiver, between a feeding and a reserve position. Holders 62 are each adapted to receive a magazine 66, essentially similar to magazines 30, so that the mouth thereof is insertable through a mating opening 68 in receiver 14 and, when the magazine is actuated by the respective holder 62 to the feeding position, the leading cartridge 31 or 31' is positioned for contact by bolt 16 during its forward stroke. When one of the holders 62 is in the reserve position the rear end of the leading cartridge 31 or 31' therein is displaced outwardly away from contact by bolt 16 during forward travel to battery position. Latches 70 releasably hold magazines 66 in holders 62.

Holders 62 are displaceable between the feeding and reserve positions by a switch device 71 which includes an actuator 72 that links the two holders so that lateral displacement thereof moves one of the holders to the feeding position and simultaneously moves the opposite holder to the reserve position. Actuator 72 is actuatable manually or by electric solenoid 36 through the contact of the extending ends of shaft 58 thereof with cooperating

arms 74 on actuator 72. Thus, it is evident that cartridge 31 or 31' may be quickly and easily selected for firing.

Although a particular embodiment of the invention has been described in detail herein, it is evident that many variations may be devised within the spirit and scope thereof and the following claims are intended to include such variations.

I claim:

1. A gun including a receiver, a barrel, a bolt disposed in said receiver for reciprocation between a battery and a recoil position, a first magazine adapted for holding a supply of cartridges of specific military characteristics and for biasing a leading one of said cartridges to a mouth of said first magazine, a second magazine separate from said first magazine and adapted for holding a supply of cartridges of different military characteristics and for biasing the leading one of such said cartridges therein to a mouth of said second magazine, means for mounting said first and second magazines on said receiver separately and so that each of said magazines is displaceable thereon between a feeding position wherein the leading cartridge therein is positioned for contact by said bolt during travel to the battery position and transfer thereby to said barrel and a reserve position wherein the leading cartridge is positioned away from contact by said bolt, and a switch device for displacing said first and second magazines when mounted on said receiver so that when one is displaced to its feeding position the other is simultaneously displaced to its reserve position.

2. A gun including a receiver, a barrel, a bolt disposed in said receiver for reciprocation between a battery and a recoil position, a first magazine adapted for holding a supply of cartridges of specific military characteristics and for biasing a leading one of said cartridges to a mouth of said first magazine, a second magazine separate from said first magazine and adapted for holding a supply of cartridges of different military characteristics and for biasing the leading one of such said cartridges therein to a mouth of said second magazine, means for mounting said first and second magazines on said receiver separately and so that each of said magazines is displaceable thereon between a feeding position wherein the leading cartridge therein is positioned for contact by said bolt during travel to the battery position and transfer thereby to said barrel and a reserve position wherein the leading cartridge is positioned away from contact by said bolt, and a switch device for displacing said first and second magazines when mounted on said receiver so that when one is displaced to its feeding position the other is simultaneously displaced to its reserve position, said switch device including an actuator slidingly mounted on said receiver, means for linking said actuator to said first and second magazines, an electric solenoid with an actuatable shaft and arms on said actuator having contact with said shaft for transferring displacement thereof to said actuator.

3. The gun as defined in claim 2 wherein said means for mounting include a holder for each said first and second magazines adapted for slidingly receiving the respective magazines for displacement therein between the feeding and reserve positions, and said actuator includes a bar terminated at each end by a latch adapted for releasably securing said first or second magazine to said actuator.

4. The gun as defined in claim 2 wherein said means for mounting include a holder for each said first and second magazines, a latch on each of said holders for releasably securing the respective one of said first and second magazines against displacement therein, and means for pivotally mounting said holders on said receiver so as to be respectively displaceable between a feeding position wherein the base of the leading one of said cartridges in the respective magazine is positioned for contact by said bolt during travel to the battery position and transfer thereby to said barrel and a reserve position wherein the leading one of the cartridges is positioned away from contact by said bolt.

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