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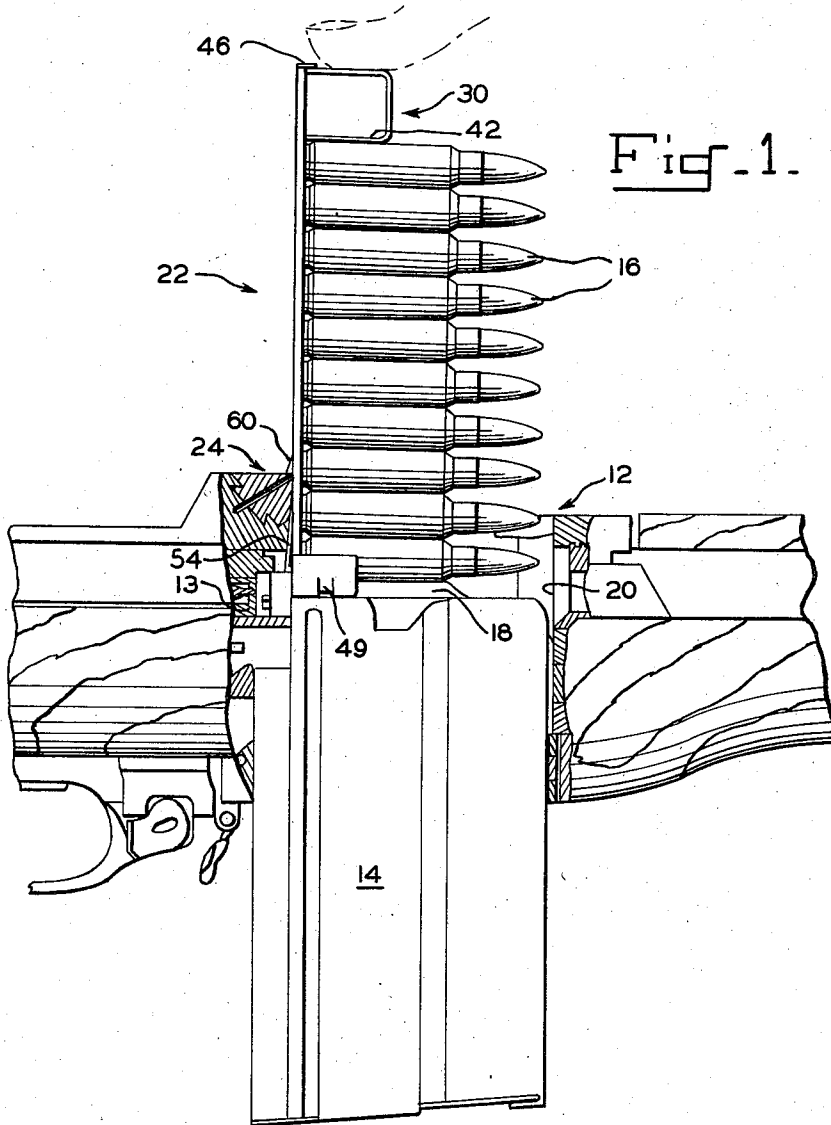
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2,856,720

MAGAZINE CHARGER FOR A FIREARM

Filed Aug. 14, 1956

2 Sheets-Sheet 1



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Fig. 2.

Fig. 3.

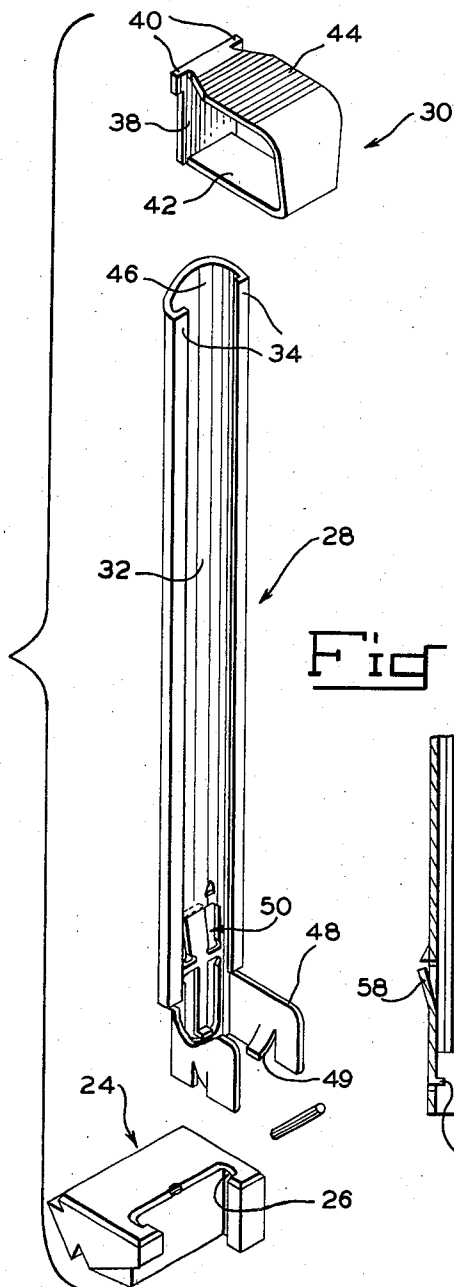
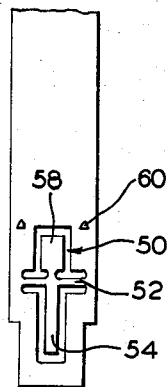
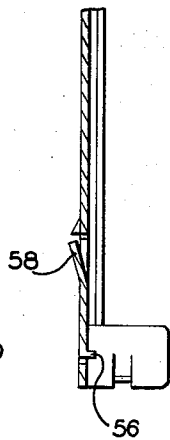
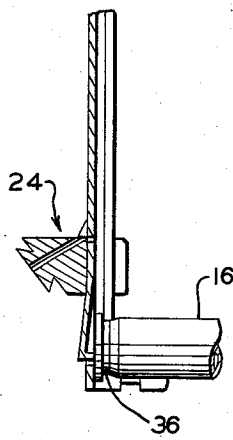


Fig. 4.

Fig. 5.



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MAGAZINE CHARGER FOR A FIREARM

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Application August 14, 1956, Serial No. 604,050

1 Claim. (Cl. 42—87)

(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 purpose without the payment of any royalty thereon.

This invention relates to devices for loading firearm magazines and more particularly to a charger for loading magazines while assembled to firearms.

It is an object of this invention to provide a charger for easily loading a magazine while assembled to a firearm whereby the magazine need not be removed for loading or replaced when the supply of cartridges therein is depleted.

It is another object of this invention to provide a charger for loading the magazine of a firearm when only partially depleted to assure a full load in the magazine at all times.

It is still another object of this invention to provide a charger for loading a firearm magazine which is easily operated with only one hand whereby the firearm may continue to be pointed in the direction of a target and ready for instant use during the loading operation.

It is another and still further object of this invention to provide a charger for loading a firearm magazine which is inexpensive to manufacture and positive in operation.

It is still another and further object of this invention to provide a charger for loading a firearm magazine which releasably locks a column of cartridges therein for transit and automatically unlocks the column when assembled to a firearm.

It is yet another object of this invention to provide a charger for loading a firearm magazine which retains those cartridges which have not been pressed into the magazine to prevent a loose cartridge being left in the firearm receiver above the magazine to jam the firearm during battery movement of the bolt.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

Fig. 1 is an elevational partially cross-sectioned view of the loaded charger installed to a firearm;

Fig. 2 is an enlarged exploded view of the charger and guide;

Fig. 3 is an enlarged fragmentary view of the rear end of a charger showing the cartridge lock;

Fig. 4 is an enlarged fragmentary view showing the cartridge lock in normal position; and

Fig. 5 is a view similar to Fig. 4 but showing the cartridge lock actuated to unlock position when the charger is assembled to the firearm.

Shown in the figures is a firearm having a receiver 12 with a bolt 13 slidably mounted therein and a cartridge magazine 14 separably mounted thereto. Magazine 14 is of conventional two-column type and is loaded by the insertion of a plurality of cartridges 16 into the top end thereof against a spring-loaded follower 18. Immediately above magazine 14 is an ejection port 20 which provides free access of a magazine charger 22 to the top of the

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magazine when bolt 13 is in recoil position. Mounted to receiver 12 at the rear end of ejection port 20 is a guide 24 having a vertically disposed T-slot 26 there-through which slidably receives charger 22 and securely holds such charger while being unloaded into magazine 14.

Charger 22 includes an elongated channel member 28 and a pusher 30. Channel member 28 is of C cross-section and is provided with a back side 32 and lip portions 34 along the sides thereof. Lips 34 are spaced from each other so that they are slidably received by the extractor grooves 36 in the cartridges 16, whereby the cartridges are retained for sliding movement along channel member 28. Such lip portions are spaced from back side 32 so that with the lip portions slidably received by the extractor grooves the bases of the cartridges are positioned closely to such back side, whereby the cartridges extend substantially at right angles from charger 22.

Channel member 28 is long enough to retain a predetermined number of cartridges and pusher member 30 which is also slidably mounted to such body portion. For convenience in keeping account during loading, channel member 28 holds one-half the amount held by magazine 14. Pusher member 30 is bent to form a rectangle and includes a rear side 38 having a pair of opposed lug portions 40 extending from the upper portion thereof to be slidably received between lip portions 34 and back side 32, an underside 42 extending forwardly from such rear side, and a top side 44. As the cases of cartridges 16 have a conventional taper, the junction of rear side 38 and underside 42 is engageable with the rim of the cartridges. Whereby, when pusher member 30 is pressed downwardly against the column of cartridges in channel member 28, the cartridges are moved easily and without binding therealong. After being assembled to channel member 28, pusher 30 is retained therein by a flange portion 46 which extends from the top of back side 32 forwardly to block movement of such pusher from the channel member.

Extending forwardly from each side of the lower end of channel member 28 is an arm portion 48, and such arm portions are spaced from each other so as to restrain the cartridge positioned therebetween while being pressed into magazine 14 and so prevent cocking and binding. Such arm portions also prevent removal of pusher 30 from the lower end of channel member 28. A tab 49 is formed in each of the arm portions 48 by parallel cuts from the bottom side thereof and such tabs are bent inwardly to resiliently retain the bottom one of the cartridges 16 when magazine 14 will take only a portion of the cartridges in the charger. Underside 42 and rear side 38 of pusher 30 are extendable between arm portions 48 until stopped by the engagement of lug portions 40 with such arm portions to facilitate the injection of the last one of the cartridges in charger 22 into magazine 14.

Formed by a die cut in back side 32 at the lower end thereof is a cartridge lock 50. Such cartridge lock is cut in the form of a cross provided with a pair of arm portions 52 which are integral with such back side and provide pivotal support for the cartridge lock. Extending below arm portions 52 is a latch portion 54, the lower end of which is bent inwardly at right angles to form a tongue 56 which is engageable by the rim of the bottom one of cartridges 16 in charger 22 to block movement of the cartridges from channel member 28. Whereby, the column of cartridges are releasably held between pusher 30 and tongue 56. Extending above arm portions 52 is an actuator portion 58 which is bent angularly outward so that when channel member 28 is assembled to

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guide 24 the rear side of T-slot 26 engageably presses such actuator portion inwardly. Whereby, latch portion 54 is pivoted outwardly to automatically disengage tongue 56 from the bottom one of the cartridges in the charger so that the cartridges therein may be pressed by pusher 30 into magazine 14. Protruding rearwardly from channel member 28 is a pair of ear portions 60 which are engageable with the top side of guide 24 to correctly position charger 22 vertically in respect to magazine 14.

It is also possible for the column of cartridges 16 in channel member 28 to be pressed therefrom into magazine 14 by the operator through direct contact of the operator's thumb with the top one of cartridges 16 without the use of pusher 30 if pressure is applied to such cartridges close to the channel member to prevent cocking and binding. This will eliminate the need for pusher 30, and the length of channel member 28 could be shortened but the loading is more readily accomplished through the use of the pusher 30 and care does not have to be taken as to the proper application of pressure.

Operation

When the operator wishes to replenish the supply of cartridges in magazine 14, he locks bolt 13 in recoil position and installs a loaded charger 22 to the firearm by sliding such charger downwardly through T-slot 26 in guide 24 until stopped by the engagements of the ear portions 60 with the top of such guide. Charger 22 is now firmly held to the firearm while the operator unloads the cartridges therein into magazine 14.

During transit, the column of cartridges in charger 22 was securely held therein between the engagements of pusher 30 with the top one of the cartridges and tongue 56 with the bottom one. When charger 22 was inserted into T-slot 26 actuator portion 58 was cammed inwardly to pivot latch portion 54 outwardly to release the column of cartridges in channel member 28. The operator may now load magazine 14 from charger 22 by a downward pressure against pusher 30. If the magazine will not take all the cartridges in the charger, the bottom one in such charger will be resiliently restrained therein by the tabs 49. Whereby, when charger 22 is removed from the firearm, there will not be a loose cartridge 16 left in receiver 12 to jam the firearm.

From the foregoing, it is clearly apparent that there is herein provided a charger whereby the supply of cartridges in a magazine may be replenished while the magazine is assembled to the firearm, and a loose cartridge is

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prevented from being left in the firearm receiver with such charger being compact in size, inexpensive to manufacture, and positive in operation.

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 claim is intended to include such variations.

I claim:

10 For a firearm having a magazine and a port in alignment therewith, the combination of a charger for storing a column of cartridges provided with annular extractor grooves and rims formed thereby and for loading the cartridges into the magazine while assembled to the firearm including a channel member cooperable with the 15 extractor grooves for slidably mounting a column of cartridges and maintaining the cartridges in position to be pressed into the magazine, a guide mounted on the firearm at the port and provided with a T-slot for slidably mounting said charger on the firearm in alignment with 20 the magazine, lock means for releasably holding the column of cartridges in said charger during transit and for releasing the column of cartridges when said charger is mounted in said T-slot and for holding any cartridges 25 remaining in said channel member when said charger is removed from said guide, said lock means being cut from the back side of said channel member in the form of a cross and including a pair of arms integral with said back side for pivotally supporting said lock means, a 30 latch portion extending below said arms, a tongue extending inwardly from the end of said latch portion for engagement with the underside of the rim of the bottom one of the cartridges in said charger to prevent release of the cartridges therefrom, and an actuator portion extending upwardly and outwardly from said arm portions 35 for camming engagement with the back side of said T-slot to pivot said latch portion for disengaging said tongue from the rim of the bottom cartridge when said charger is mounted in said T-slot.

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