May 9, 1950 C. H. BENSON 2,507,364

MAGAZINE FOR FIREARMS

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Fig. 1.

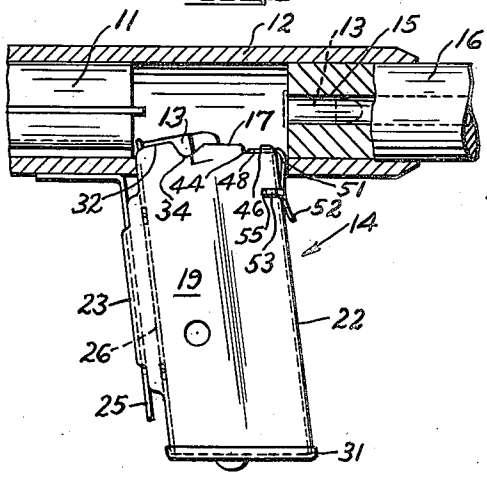


Fig. 2.

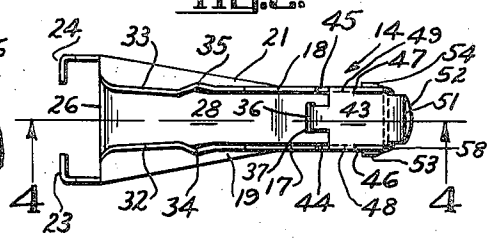


Fig. 5.

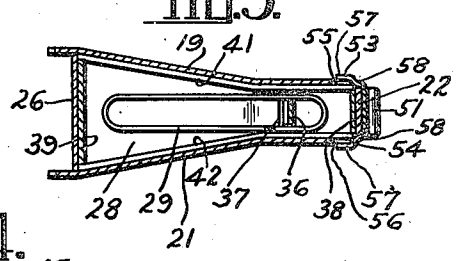


Fig. 3.

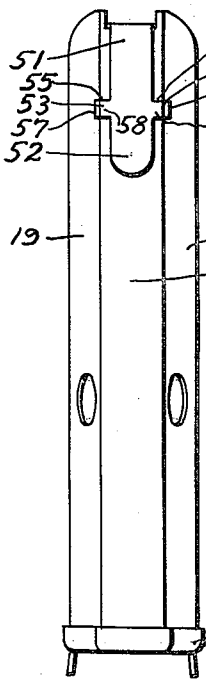
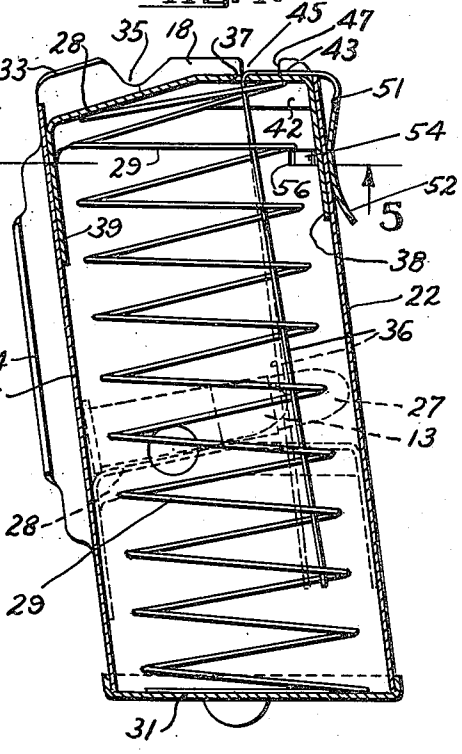


Fig. 4.



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MAGAZINE FOR FIREARMS

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2 Claims. (Cl. 42—50)

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This invention relates to magazines for firearms, and more particularly to a box type magazine adapted to hold a plurality of cartridges in position to be fed, one at a time, into the chamber of the barrel of a repeating firearm.

In some instances firearms, and particularly rifles, are adapted to receive in the chambers of their barrels, cartridges of the same calibre but of different lengths. This especially is true in respect to .22 calibre repeating rifles, which are so chambered that they are adapted to receive either .22 short, .22 long, or .22 long rifle cartridges.

One object of this invention is to provide a single magazine which may be readily adapted to receive, carry, and efficiently permit the feeding of cartridges of the same calibre but of different lengths.

Another object of this invention is to provide a box type cartridge magazine for a firearm having means to readily convert it from a long cartridge holding magazine into a short cartridge holding magazine, or vice versa.

A further object of this invention is to provide an improved cartridge magazine for firearms which will be relatively inexpensive to manufacture, simple in construction, compact, of pleasing appearance, and which is very efficient and durable in use.

With these and other objects in view, which will appear as the description proceeds, there has been illustrated in the accompanying drawings one form in which the features and principles of this invention may be conveniently embodied in practice.

In the drawings:

Figure 1 is a broken side view of a firearm having a box type cartridge magazine operatively associated therewith in which the features and principles of this invention are embodied;

Figure 2 is an enlarged top plan view of the cartridge magazine shown in Figure 1;

Figure 3 is an enlarged front view of the same;

Figure 4 is a vertical sectional view taken on line 4—4 of Figure 2 and showing the magazine adapted for use to hold relatively short cartridges; and

Figure 5 is a cross-sectional view taken on the line 5—5 of Figure 4.

For the purpose of illustrating a practical application of the novel features and principles of this invention, parts of a bolt action rifle of a well-known form is shown in Figure 1 having the improved form of box-type cartridge magazine of this invention operatively associated therewith. In such forms of firearms, a bolt 11 is slidably mounted in a receiver 12 for the purpose, among others, of forcing a cartridge 13 from the mouth of a box-type magazine 14 into a chamber 15, adapted to receive cartridges of

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the same calibre but of different lengths and formed in the breech end of a barrel 16, and to lock it in such position.

The magazine 14 may be detachably secured to the receiver 12 by any suitable means and extends upwardly through an opening formed in the underside of the receiver 12. to properly position the upper edges 17 and 18, of its sides 19 and 21, for them to act as guides for the cartridge 13 as it is forced into the chamber 15 by the bolt 11. In the form of magazine shown one piece of sheet metal is folded over to form a casing of box-like structure having a front end plate 22 from which the sides 19 and 21 extend rearwardly. The rear edges 23 and 24 of the sides 19 and 21 respectively, are folded inwardly toward each other, being spaced apart to permit a catch tongue 25 to be disposed between them. The rear end of the magazine is closed by a plate 26 which has its side edges secured to the sides 19 and 21 in any suitable manner and acts as a guide for the cartridge 13, and rear primer ends of which engage and slid along the same as they move upwardly in the magazine 14.

The magazine 14 is of sufficient depth to receive a plurality, six or seven, cartridges, and is of sufficient length to receive cartridges of the maximum length provided for the calibre desired. For instance, when .22 calibre cartridges are to be used, the length of the magazine is sufficient to receive a .22 long rifle cartridge 27, see dotted lines Fig. 4. The cartridges 13 and 27 both being .22 calibre, are disposed in the magazine 14 in vertical superimposed position, the lower one being supported upon a follower 28 which is slidably mounted in the magazine 14 and is guided by the sides 19 and 21, and the end plates 22 and 26 thereof. A coiled spring 29 is provided and positioned to react between the follower 28 and a cover plate 31, which is provided to form the bottom of the magazine 14, to urge the cartridge upwardly to position the upper one in front of the bolt 11. The cartridges in the magazine 14 are retained against being pushed upwardly out of its open upper end or mouth by inturned lips 32 and 33 formed from the material of the magazine sides 19 and 21, respectively. Notches 34 and 35 cut in the sides 19 and 21 respectively at their upper edges permit the release of the cartridge being pushed forwardly by the bolt 10 from the retaining action of the lips 32 and 33.

As illustrated in dotted lines in Figure 4, the .22 calibre short cartridge 13 is considerably shorter than the .22 long rifle cartridge 27 and, if used in a magazine of sufficient length to receive long rifle cartridges 27, would tend to slip forwardly out of vertical alignment in the magazine, and also tend to tilt downwardly, when it is pushed forwardly by the bolt 11, and become jammed between the bolt 11 and the forward end of the

magazine, or to tilt downwardly enough to not properly enter the bore 15 of the barrel 16. To obviate these disadvantages, a member 36 is provided which may be readily inserted in and removed from the magazine 14 at its upper open end. The member, or spacer, 36 is preferably of relatively thin spring steel and extends downwardly from the open upper end of the magazine 14 through a slot 37 provided in the follower 28 and lies within the coils of the spring 29. The spacer 36 is spring, or biased, tensioned and is slightly sprung toward the front end 22 of the magazine 14 to constantly engage and bear against the front edge of the slot 37 in the follower 28, which front edge provides a rearwardly directed shoulder, whereby the spacer 36 will be maintained in proper cartridge guiding position substantially its entire length by the follower 28 during the latter's movement within the magazine 14. The lower portion of the spacer 36 is free to move forwardly and rearwardly in the magazine and its lower end is spaced upwardly from the bottom cover plate 31. The follower 28 is provided with elongated depending arms 38 and 39, which bear, respectively against the magazine end plates 22 and 26 to prevent tilting of the follower 28 and to guide it in its movements in the magazine 14. The follower 28 also has depending side flanges 41 and 42 which bear, respectively, against the sides 19 and 21 of the magazine 14.

Suitable means is provided to releasably lock the spacer 36 to the upper open end of the magazine 14 and includes a horizontal portion 43 extending forwardly from the upper end of the spacer 36 to beyond the front end of the magazine 14, overlying the upper edge of the front plate 22, and being disposed between the magazine sides 19 and 21. The magazine sides 19 and 21 extend upwardly beyond the front plate 22 and are transversely slotted, as at 44 and 45 respectively to provide rearwardly directed shoulders 46 and 47. Tongues 48 and 49, extending one from each side edge of the spacer portion 43, seat against the shoulders 46 and 47 respectively to locate the upper end of the spacer 36 in proper cartridge locating position when the follower 28 is in its lowermost position in the magazine 14.

The outer end 51 of the spacer portion 43 is extended downwardly and bent inwardly toward and into engagement with the magazine end plate 22 and its lower end 52 is slightly curved away from the plate 22 to provide a manipulating member. Intermediate the end 51 of the portion 43 and the lower end 52 and substantially at the point of contact with the plate 22, tongues 53 and 54 extend rearwardly from the side edges of the end 51. Slots 55 and 56 are provided in the magazine sides 19 and 21 to respectively receive the tongues 53 and 54. The extreme rear ends 57 of the tongues 53 and 54 are outwardly spaced apart slightly more than the portions 58 thereof to straddle the magazine and by engaging the sides thereof to spring the tongues apart to assist in guiding the tongue portions 58 into the slots 55 and 56.

By the provision of a spacer 36 in combination with a magazine structure, as above described, a box magazine may be relatively inexpensively manufactured and readily converted from one suitably adapted to hold and feed cartridges of one length, to one suitably adapted to hold and feed cartridges of another length. By providing a spacer which is detachably locked in place by means located at the upper end of the magazine, which end is inserted into a firearm for use therewith, accidental release of the spacer during use of the firearm is obviated. The arrangement whereby the follower locates the spacer substantially its entire length and maintains it under constant tension to press tongues at its upper end against locating shoulders insures constant efficient operation of the spacer.

While there has been shown and described herein a preferred form in which the features and principles of this invention are practically embodied, it will be understood that the same may be embodied in other specific forms without departing from the spirit and essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the claims rather than to the foregoing description to indicate the scope of the invention.

Having thus fully disclosed the invention, what is claimed as new and for which it is desired to secure Letters Patent, is:

1. In a box magazine, front and rear walls spaced apart to receive cartridges relatively long in length therebetween, and a spacer comprising a narrow strip of relatively thin material extending downwardly from the top of said magazine with its depending portion free to move rearwardly and forwardly in the magazine, means movable lengthwise in the magazine to space and support the depending portion of the spacer from the rear wall to convert the magazine into one to receive cartridges relatively short in length between the rear wall and the spacer, means to space the upper end of the spacer from the rear wall, the material of the upper end of said spacer being extended forwardly and bent downwardly over the front wall, and means to releasably lock the bent downwardly portion and the spacer to said magazine.

2. In a box magazine, front and rear walls spaced apart to receive cartridges relatively long in length therebetween, and a spacer comprising a narrow strip of relatively thin material extending downwardly from the top of said magazine with its depending portion free to move rearwardly and forwardly in the magazine, means movable lengthwise in the magazine to space and support the depending portion of the spacer from the rear wall to convert the magazine into one to receive cartridges relatively short in length between the rear wall and the spacer, means to space the upper end of the spacer from the rear wall, the material of the upper end of said spacer being extended forwardly and bent downwardly over the front wall, said front wall having a slot in its side edge, and a tongue extending rearwardly from the said bent downwardly portion adapted to snap into the slot in the side edge of the front wall to releasably lock the spacer to said magazine.

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