

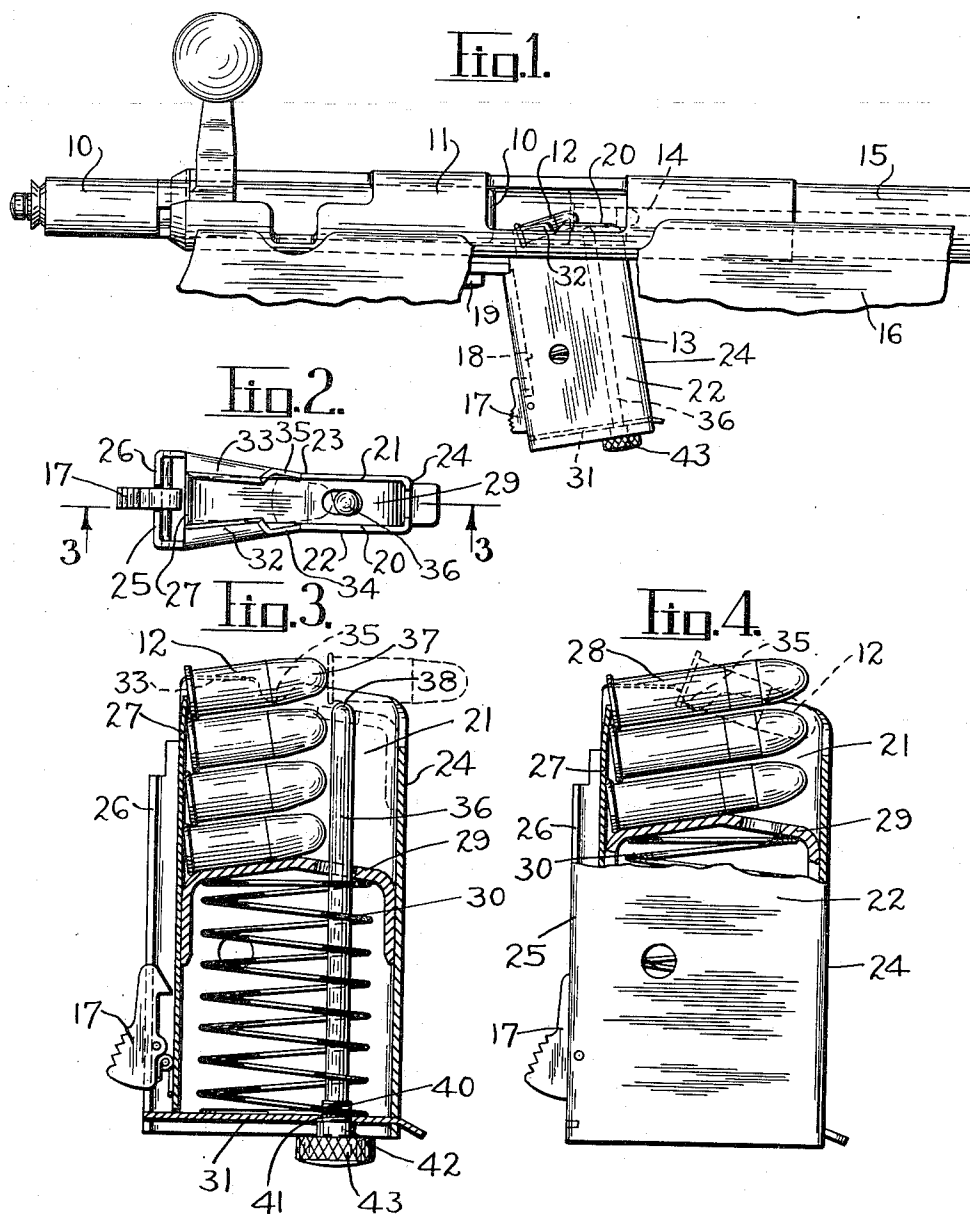
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CARTRIDGE MAGAZINE FOR FIREARMS

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CARTRIDGE MAGAZINE FOR FIREARMS

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This invention relates to cartridge 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 a 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, as desired by the user. It has been the practice to provide at least two different magazines, one for the .22 short cartridge, and another for the .22 long, and .22 long rifle, cartridges. Such a procedure resulted in considerable inconvenience, as well as an added expense to the user, as it required him to obtain and carry two or more different sizes of magazines whenever he wished to use different cartridges in firearms adapted for the same.

Attempts have been made to use a magazine, designed to receive and hold relatively long cartridges, to receive and hold short cartridges, but such a procedure has caused considerable inconvenience and was found to be particularly disadvantageous, in that the short cartridges would tilt downwardly as they were fed forwardly toward the chamber in the barrel and jam, and to slide forwardly and to become improperly disposed within the magazine.

In order to obviate the above inconveniences, and disadvantages, and to avoid any added expense, it is contemplated as one object of this invention, to provide a single magazine which may be readily adapted to receive and carry, and efficiently feed, 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 wherein means is provided to readily convert it from long cartridge holding magazine into a short cartridge holding magazine, or vice versa.

Still another object is to provide means to convert a box type magazine adapted to receive and guide relatively long cartridges of one calibre into one adapted to receive and guide relatively short cartridges of the same calibre with substantially equal efficiency.

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 pleas-

ing 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 drawing one form in which the invention may be conveniently embodied in practice.

In the drawing, wherein like reference numerals designate like parts throughout the several views:

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

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

Figure 3 is a vertical sectional view taken on line 3—3 of Figure 2 and showing the magazine adapted for use to hold relatively short cartridges; and

Figure 4 is a view similar to Figure 3 but showing the magazine adapted for use to hold relatively long cartridges.

For the purpose of illustrating a practical application of the novel features and principles of this invention, a bolt action repeating rifle of usual and well-known form is shown in Figure 1 with the improved form of box-type cartridge magazine of this invention operatively associated therewith. In such forms of firearms, a bolt 10 is slidably mounted in a receiver 11 for the purpose, among others, of forcing a cartridge 12 from the mouth of a box-type magazine 13 into a chamber 14, adapted to receive cartridges of the same calibre but of different lengths and formed in the receiver end of a barrel 15, to lock it in such position. Both the receiver 11 and the barrel 15 are supported by a stock 16.

The magazine 13 is detachably secured to the receiver 11 by means of a spring actuated catch 17 which engages the lower end of a downwardly projecting finger 18 secured to the receiver 11 by a screw 19. The magazine 13 extends upwardly through the stock 16, and through an opening formed in the underside of the receiver 11, to properly position the upper edges 20 and 21, of its sides 22 and 23, for them to act as guides for the cartridge 12 as it is forced into the chamber 14 by the bolt 10. 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 24 from which the sides 22 and 23 extend rearwardly. The rear edges 25 and 26 of the sides 22 and 23 respectively are folded inwardly toward each other, being spaced apart to

permit the catch 17 to be disposed between them. The rear end of the magazine is closed by a plate 27 which is spaced inwardly from the edges 25 and 26 to form a slot, down which the finger 18 extends so as to be engaged by the catch 17 and whereby the magazine 13 is supported in properly tilted position to present a cartridge 12 to the forward end of the bolt 10. The rear plate 27 also acts as a guide for the cartridges 12, the rear ends of which engage and slide along the same as they move upwardly in the magazine.

The magazine 13 is of sufficient depth to receive a plurality, usually 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 28, as illustrated in Figure 4. The cartridges 12 and 28, assuming that the cartridge 12 is a .22 calibre short, are disposed in the magazine 13 in vertical superimposed position, the lower one being supported upon a follower 29 which is slidably mounted in the magazine 13 and is guided by the sides 22 and 23, and the end plates 24 and 27 thereof. A coiled spring 30 is provided and positioned to react between the follower 29 and a plate 31 which is provided to form the bottom of the magazine 13 to urge the cartridges upwardly to position the upper one in front of the bolt 10. The cartridges in the magazine 13 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 its sides 22 and 23 respectively. Notches 34 and 35 cut in the sides 22 and 23 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 Figures 1, 2, and 3, the .22 calibre short cartridge 12 is considerably shorter than the .22 long rifle cartridge 28 and, if used in a magazine of sufficient length to receive long rifle cartridges 28, 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 10, and become jammed between the bolt 10 and the forward end of the magazine, as indicated in dotted lines in Figure 4, or to tilt downwardly enough to not properly enter the bore 14 of the barrel 15. To obviate these disadvantages, a vertically disposed rod-like member, or stem, 36 has been provided which is spaced inwardly from the front end 24 of the magazine 13 sufficiently to be engaged by the forward end 37 of the shortest length of cartridges used, herein shown as a .22 short, and to limit any forward slipping movement thereof while they are in the magazine 13 and are being fed upwardly by the follower 29. The member 36 is also of sufficient length to have its upper end 38 act as a guiding support for the cartridges 12, which engage this end 38 as they are pushed forwardly by the bolt 10 and are prevented from tilting downwardly and are properly guided into the bore 14 of the barrel 15 thereby.

As shown herein, the member 36 is in the form of an elongated stem which extends upwardly through the coils of the spring 30 and through an elongated opening 39 provided in the follower 29. The stem, or member 36, has a threaded portion 40, which screw threads into a threaded opening 41 provided in the bottom plate 31 for this purpose. The member or stem 36 is also provided with a boss 42, which is larger in diam-

eter than the threaded portion 40, to adapt it to abut against the plate 31 and lock the member 36 in position. A knurled thumb lug 43 is also provided by which the stem 36 may be rotated to screw thread the portion 40 into, or to readily remove it from, the bottom plate 31 to operably position the member 36 in or to remove it from the magazine 13. It is proposed to furnish a member 36 with each magazine 13.

By providing a magazine of the nature disclosed it is possible to use it to carry different lengths of cartridges of the same calibre and to efficiently operate the firearm when any one of a plurality of lengths of cartridges are used. For instance, when it is desired to use .22 short cartridges, the member, or stem, 36 is disposed in the magazine, as shown in Figure 3, whereby these cartridges will be guided in their vertical movement in the magazine and upon being pushed therefrom by a bolt, or the like, and will be properly guided forwardly into the chamber of the barrel of the firearm. When it is desired to use the magazine for receiving and carrying .22 long, or .22 long rifle, cartridges, the member 36 is not disposed in the magazine which will then appear as shown in Figure 4.

While there has been shown and described herein one form of improved cartridge magazine for firearms, it is to be understood that the invention may be embodied in other forms without departing from the spirit and essential attributes thereof. It is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, and it will be further understood that each and every novel feature and combination thereof, present in, or possessed by, the device herein disclosed, forms a part of the invention included in this application.

What is claimed as new and for which it is desired to secure Letters Patent, is:

1. In a box-type magazine adapted in length and width to carry cartridges of the same calibre but of different lengths, a bottom plate, and a readily insertable and removable rod-like member extending upwardly through said bottom plate and disposed in position in said magazine to be engaged by the forward end of the shortest length of cartridges to be disposed therein, to prevent them slipping forwardly in said magazine.

2. In a box-type magazine having a bottom plate and being adapted to receive cartridges in vertical superimposed relation, a spring actuated follower to urge the cartridges upwardly in said magazine into position for the upper one to be engaged and pushed forwardly out of said magazine, and a readily insertable and removable rod-like member extending upwardly through said bottom plate and through said magazine in position to be engaged by the forward end of and to limit the forward movement of the cartridges therein and having an upper end disposed to be engaged by the forward end of and to guide the upper cartridge as it is pushed forwardly from said magazine.

3. In a box-type magazine having a bottom plate and being adapted to receive cartridges in vertical superimposed relation, a spring pressed follower to urge the cartridges upwardly in said magazine into position for the upper one to be engaged and pushed forwardly out of said magazine, and a readily insertable and removable rod-like member detachably secured to and extending upwardly through said bottom plate and through said magazine in position to engage

the forward end of and to limit the forward movement of the cartridges therein.

4. In a box-type magazine in accordance with claim 3 and in which the readily insertable and removable rod-like member is screw-threaded to the bottom plate where it extends therethrough, and means on the protruding portion below said plate to be grasped to unscrew said member to remove it from said magazine.

5. In a box-type magazine in accordance with claim 2 and in which the readily insertable and removable rod-like member is screw-threaded into said bottom plate, and means on one of its ends of said member to be grasped to remove said member from said magazine.

6. In combination, a box-type magazine having a bottom and being adapted in length and width to hold cartridges of the same calibre but of different lengths, a follower in said magazine for supporting the cartridges, a follower spring for acting on said follower to urge it upwardly to move the cartridges upwardly in said magazine, and a rod-like member readily insertable in and removable from said magazine from without and below the bottom thereof, without removing said follower and said follower spring therefrom, to adapt said magazine to selectively and operably hold cartridges comparatively short in length and ones comparatively long in length, respectively, said member being disposed in said magazine in position to be engaged by the forward end of the cartridges, short in length, to guide them as they move upwardly therein.

7. In combination, a box-type magazine having a bottom plate and a front wall against which the bullet end of a first length cartridge may engage to guide the cartridge during its upward movement in said magazine, a removable rod-like member passing upwardly through said bottom plate into the interior of the magazine and spaced inwardly from said front plate sufficiently

to be engaged by the bullet end of a second-length cartridge to guide this second cartridge during its upward movement in said magazine, and cooperating means between said bottom plate and said member to releasably secure them together.

8. In combination, a box-type magazine having a bottom plate and a front wall against which the bullet end of a first length cartridge may engage to guide the cartridge during its upward movement in said magazine, a removable rod-like member passing upwardly through said front plate and spaced inwardly from said front plate sufficiently to be engaged by the bullet end of a second length cartridge to guide this second cartridge during its upward movement in said magazine, cooperating means between said bottom plate and said member to releasably secure them together, said member being releasable from said bottom plate by a rotative movement thereof in respect to said plate, and means on one of the ends of said member outside of said magazine to so rotate said member.

9. In a box-like magazine adapted to hold cartridges of different lengths and having upwardly extending front end and rear end walls spaced apart sufficiently to receive relatively long cartridges disposed lengthwise therebetween, one of said end walls adapted to guide the cartridges in upward movement relatively thereto, a bottom wall for said magazine, a removable rod-like member extending upwardly through said bottom wall, and means adapted to be releasably engaged with said bottom wall to secure said member thereto and to support it spaced from one of said end walls in position to be engaged by an end of a cartridge relatively short in length to guide the short cartridge in upward movement in the magazine.

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