Dec. 9, 1941. F. L. HUMESTON 2,265,170

BOX MAGAZINE FOR FIREARMS

Filed Dec. 28, 1938

Fig. 1.

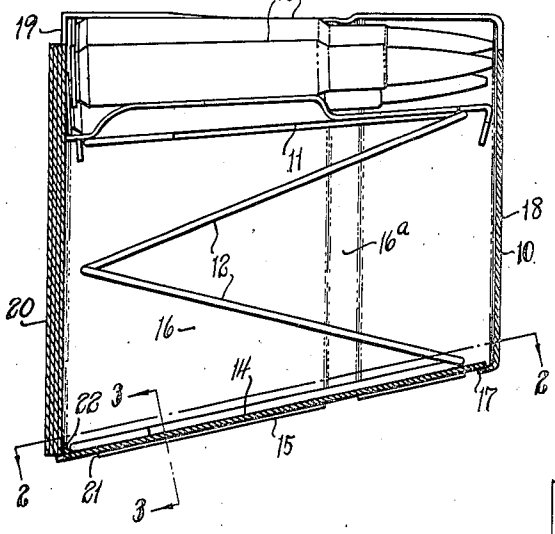


Fig. 3.

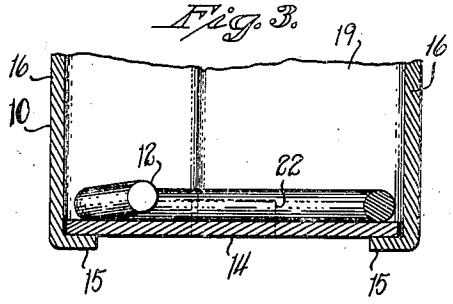


Fig. 4.

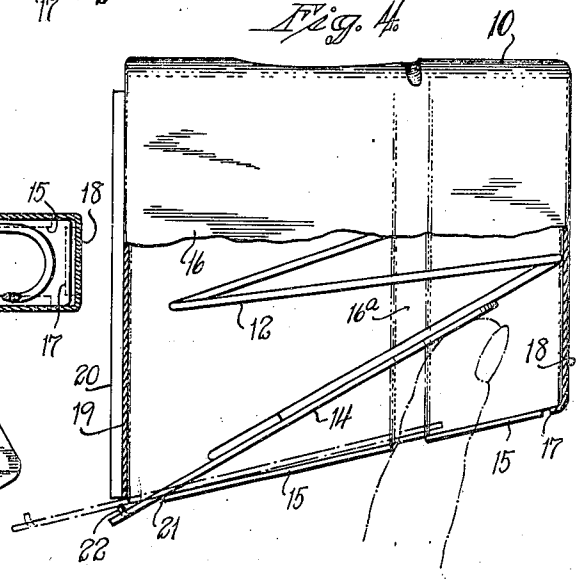


Fig. 2.

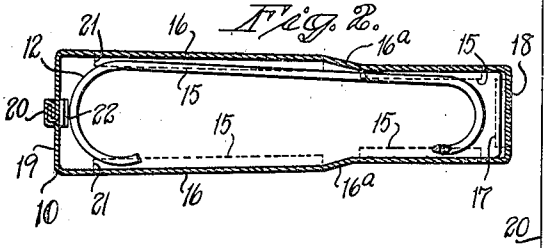


Fig. 5.

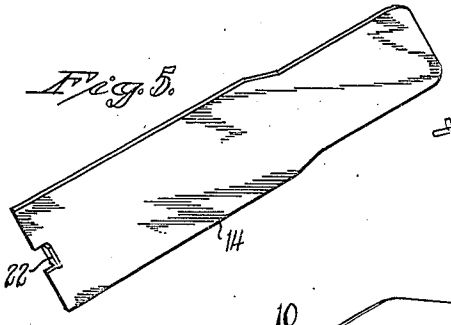
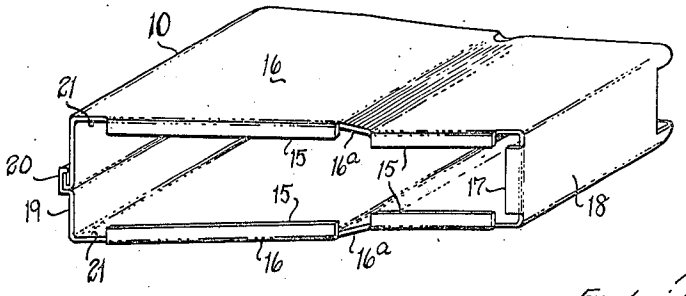


Fig. 6.



Inventor
By Frederick L. Humeston
Seymour Earle Nichols
Attorneys

Patented Dec. 9, 1941 2,265,170

UNITED STATES PATENT OFFICE

2,265,170

BOX MAGAZINE FOR FIREARMS

Frederick L. Humeston, New Haven, Conn., assignor, by mesne assignments, to Western Cartridge Company, a corporation of Delaware

Application December 28, 1938, Serial No. 248,076

6 Claims. (Cl. 42—50)

This invention relates to an improvement in magazines for firearms and more particularly to the type of magazines commonly known as box-magazines.

One of the objects of the present invention is to provide a superior box-magazine characterized by simplicity of construction and ease of assembly and disassembly.

A further object of the present invention is to provide a superior box-magazine so constructed and arranged that the interior elements, such as the follower and follower-spring, may be readily removed for replacement, repair, or salvaged in the event that the magazine-body itself becomes so badly injured as to be useless.

Another object of the present invention is to provide a superior box-magazine construction wherein the bottom-plate is removable and wherein the follower-spring discharges the function of normally maintaining the said bottom-plate in its locked position.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art and which are not claimed in any separate application.

In the accompanying drawing, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a view in vertical central section of a box-magazine embodying the present invention;

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a broken view in vertical section taken on the line 3—3 of Fig. 1;

Fig. 4 is a view partly in side-elevation and partly in vertical central section of the box-magazine showing the bottom-plate tilted into its unlocked position preparatory to its rearward-withdrawal as indicated in broken lines;

Fig. 5 is a perspective view of the bottom-plate; and

Fig. 6 is a perspective view of the magazine-body viewing the same mainly from the under-edge thereof.

The particular box-magazine herein chosen for the purpose of illustrating the present invention includes in the main, a rectangular magazine-body generally designated by the reference character 10 and preferably formed of sheet-metal, a sheet-metal cartridge-follower 11 vertically-movable within the said magazine-body, and a follower-spring 12 preferably composed of spring wire.

As is illustrated in Fig. 1, a staggered column of cartridges 13 normally rests upon the upper surface of the cartridge-follower 11 and the upper reach of the follower-spring 12 presses upwardly against the said follower to sequentially present the said cartridges 13 so that the uppermost thereof may be removed for insertion into the cartridge chamber of the firearm by the usual firearm-mechanism not herein requiring description.

The bottom reach of the follower-spring 12 rests upon a sheet-metal bottom-plate 14 and, under all normal operating conditions, serves to maintain the said bottom-plate seated against the respective upper faces of complemental supporting-flanges or lips 15—15 respectively projecting inwardly from the spaced-apart side-walls 16—16 of the magazine-body 10. The supporting-flanges or lips 15—15 are, as shown, interrupted about midway of their length for a distance corresponding substantially to the extent of an inwardly-tapering portion 16a—16a of the said side-walls 16—16 of the magazine-body 10.

In addition to pressing the bottom-plate 14 downwardly against the supporting-flanges or lips 15—15, the follower-spring 12 also serves to seat the under-face of the forward portion of the said bottom-plate 14 against a supporting-flange or lip 17 integral with and extending rearwardly from the front-end wall 18 of the said magazine-body 10. The rear-end wall 19 of the magazine-body 10 is, in the instance shown, constituted by the terminal portions of a piece of sheet-metal which is folded up to provide the complemental side-walls 16—16 and the front-end wall 18, and which is lock-seamed as at 20 about midway the width of the said rear-end wall 19 as is clearly indicated in the drawing.

The supporting-flanges or lips 15—15 terminate short of the adjacent forward face of the rear-end wall 19 of the magazine-body 10 to provide, what for convenience of description may be conveniently termed, releasing-gaps 21—21 through which the bottom-plate 14 may be removed and installed in a manner as will more fully hereinafter appear.

The particular box-magazine herein chosen for illustration has the rear-end wall 19 of the magazine-body 10 terminating a distance above the upper faces of the supporting-flanges or lips 15—15, a distance substantially-corresponding to the thickness of the bottom-plate 14, which thereby, under normal conditions, is enabled to extend rearwardly and underlie the lower edge of the rear wall 19 on each of the respective opposite sides of the lock-seam 20 therein.

To guard against the inadvertent or unintentional rearward displacement of the bottom-plate 14 with respect to the magazine-body 10, the said bottom-plate 14 has its central rear portion bent or deflected upwardly to provide a stop-abutment or stop-finger 22 which is normally in engagement with the forward face of the rear-end wall 19 of the said magazine-body 10 which rear-end

wall thereby constitutes a stop-abutment, as is indicated particularly well in Fig. 1. In this manner the bottom-plate 14 is prevented from being unintentionally displaced rearwardly by the engagement of its stop-finger 22 with the rear wall 19 of the magazine-body 10 and, similarly, is guarded against inadvertent forward movement by the interposition of the front-end wall 18 in its path of movement in the direction last referred to.

Normally, and as shown in Figs. 1, 2 and 3, the bottom-plate 14 is held seated against the respective upper faces of the supporting-flanges or lips 15—15 and 17 by the follower-spring 12, and is retained in place against longitudinal movement, as before described, by the front-end and rear-end walls 18 and 19. If now, for any reason, it should become desirable or necessary to remove either or both the cartridge-follower 11 and the follower-spring 12 all that will be necessary to initiate this removal operation, is for the user to thrust upwardly against the forward portion of the bottom-plate 14 to tilt the same into the position in which it is shown by full lines in Fig. 4.

The tilting movement of the bottom-plate 14, as above referred to, will be effected against the tension of the follower-spring 12 and will cause the said bottom-plate 14 to fulcrum about the upper-rear corners of the oppositely-extending supporting-flanges 15—15 to thereby swing its stop-abutment or stop-finger 22 downwardly sufficiently to clear the lower edge of the rear-end wall 19 of the magazine-body 10, as is clearly shown in Fig. 4.

If now, while the bottom-plate 14, is held in the inclined position in which it is shown by full lines in Fig. 4, the said bottom-plate is moved slightly rearwardly, its stop-finger 22 will be brought into position rearwardly of the lock-seam 20 in the rear wall 19 of the magazine-body 10, and thereafter the upward tension upon the forward end of the said bottom-plate may be released and the said bottom-plate permitted to descend upon the upper faces of the supporting-flanges 15—15 under the urge of the follower-spring 12.

When the bottom-plate 14 has been brought into the position just above described, it may now be freely withdrawn rearwardly in substantial parallelism with the supporting-flanges 15—15 as indicated by the broken lines in Fig. 4. Ultimately the continued rearward movement referred to will effect the complete withdrawal of the said bottom-plate.

When the bottom-plate 14 is completely separated from the magazine-body 10 as above described, the follower-spring 12 as well as the cartridge-follower 11 may be removed through the now open bottom-end of the said magazine-body 10 and inspected and repaired if necessary.

In initially assembling the box-magazine, or in reassembling the same after the removal of its follower-spring and cartridge-follower, all that is necessary is to first install the cartridge-follower 11 and the follower-spring 12 and then insert the forward end of the bottom-plate 14 through the releasing-gaps 21—21. When, in the installation of the bottom-plate 14, its stop-finger 22 checks its forward movement by engaging with the rear face of the lock-seam 20 in the rear-end wall 19, it will then become necessary to tilt the said bottom-plate in a manner indicated by the full lines in Fig. 4. The forward movement of the bottom-plate should now be continued until the stop-finger 22 assumes a position forwardly of the vertical plane of the front face of the rear wall 19, whereupon the release by the operator of the upward thrust upon the forward portion of the said bottom-plate will permit the follower-spring 12 to force the said bottom-plate into its normal seated position against the supporting-flanges 15—15 and 17, and also act to raise the stop-finger 22 of the bottom-plate so that it is in position for engagement with the front face of the rear-end wall 19 should any rearward sliding movement be applied thereto.

By means of a construction and arrangement of parts as exemplified in the accompanying drawing and in the foregoing description, not only is the initial assembly of the box-magazine facilitated and the cost thereof minimized, but it becomes convenient and economical to remove the follower and follower-spring from the magazine-body in the event that the said magazine-body should be injured beyond use or in the event that the follower-spring or cartridge-follower requires adjustment or repair. The readily permitted salvage of interior parts and their removal and inspection is particularly valuable in connection with military firearms though, of course, not so limited.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A box-magazine for firearms, comprising: a magazine-body provided at its bottom with bottom-plate-supporting means and with a releasing-gap leading from the said magazine-body and opening angularly with respect thereto, the said magazine-body also including a stop-abutment portion above the outer end of the angularly-opening releasing-gap; a removable bottom-plate extending in the said releasing-gap and provided with a stop-abutment releasably-engageable with the stop-abutment portion above the outer end of the angularly opening releasing gap of the said magazine-body for releasably retaining said bottom-plate in place; a cartridge-follower within the said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly urge the same respectively in opposite directions and to seat the said bottom-plate against the said bottom-plate-supporting means of the said magazine-body; the said parts being constructed and arranged so that inward pressure upon one portion of the said bottom-plate will tilt the latter against the tension of the said follower-spring to clear its stop-abutment from the stop-abutment of the said magazine-body and thereby permit the withdrawal of the said bottom-plate by sliding movement through the angularly opening releasing-gap in the said magazine-body.

2. A box-magazine for firearms, comprising: a magazine-body provided at its bottom with plate-supporting means inwardly projecting from a plurality of the walls thereof and spaced from another wall thereof a distance sufficient to provide a releasing-gap; leading from the said magazine body and opening angularly with respect

thereto a removable bottom-plate extending in the said releasing-gap and provided with a stop-abutment releasably engageable with one of the walls of the said magazine-body for releasably retaining said bottom-plate in place; a cartridge-follower within said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly seat the latter against the inwardly-projecting plate-supporting means of the said magazine-body; the said parts being constructed and arranged so that inward pressure upon one portion of the said bottom-plate will tilt the latter against the tension of the said follower-spring to clear its stop-abutment from the adjacent wall of the said magazine-body and thereby permit the withdrawal of the said bottom-plate by sliding movement through the angularly opening releasing-gap in the said magazine-body.

3. A box-magazine for firearms, comprising: a magazine-body of substantially rectangular form in cross section and provided with side-walls having oppositely-projecting inwardly-extending plate-supporting flanges terminating short of one end-wall of the magazine-body a distance sufficient to provide a releasing-gap leading from the plate-supporting flanges at the sides of the said magazine-body and opening from the latter angularly with respect thereto; a removable bottom-plate extending in the said releasing-gap and provided with a stop-abutment releasably engageable with the said end-wall of the magazine-body for releasably retaining the said bottom-plate in place in the said magazine-body; a cartridge-follower within the said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly seat the latter against the said inwardly-projecting plate-supporting flanges of the said magazine-body; the said parts being constructed and arranged so that inward pressure upon a portion of the bottom-plate remote from the releasing-gap of the said magazine-body will tilt the said bottom-plate against the tension of the said follower-spring to clear the said stop-abutment from the said adjacent end-wall and thereby permit the withdrawal of the said bottom-plate by sliding movement through the angularly opening releasing-gap in the said magazine-body.

4. A box-magazine for firearms, comprising: a magazine-body provided at its bottom with bottom-plate-supporting means and with a releasing-gap leading from the said magazine-body and opening angularly with respect thereto, the said magazine-body also including a stop-abutment portion above the outer end of the angularly-opening releasing-gap; a removable bottom-plate formed of sheet-metal, the said bottom-plate extending in the said releasing-gap and having an angularly related portion adjacent one end bent upwardly to provide a stop-finger releasably engageable with the stop-abutment portion above the outer end of the angularly-opening releasing-gap of the said magazine-body for releasably retaining said bottom-plate in place therein; a cartridge-follower within the said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly seat the latter against the bottom-plate-supporting means of the said magazine-body; the said parts being constructed and arranged so that inward pressure upon a portion of the said bottom-plate will tilt the latter against the tension of the said follower-spring and thereby clear its integral stop-finger from the said stop-abutment and thereby permit the withdrawal of the said bottom-plate by sliding movement through the angularly opening releasing-gap in the said magazine-body.

5. A box-magazine for firearms, comprising: a magazine-body of substantially-rectangular form in cross-section and provided with side-walls having oppositely-projecting inwardly-extending plate-supporting flanges terminating short of one end-wall of the magazine-body a distance sufficient to provide a releasing-gap; leading from the plate-supporting flanges at the sides of the said magazine-body and opening from the latter angularly with respect thereto a removable bottom-plate extending in the said releasing-gap and provided with an integral angularly related stop-finger releasably engaging with the end-wall of the magazine-body, for releasably retaining the said bottom-plate in place; a cartridge-follower within the said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly seat the latter against the inwardly-projecting plate-supporting flanges of the said magazine-body; the said parts being constructed and arranged so that inward pressure upon a portion of the bottom-plate will tilt the said bottom-plate against the tension of the said follower-spring to clear the angularly related integral stop-finger of the said bottom-plate from the adjacent end-wall of the said magazine-body, and thereby permit the withdrawal of the said bottom-plate through the angularly opening releasing-gap in the said magazine-body.

6. A box-magazine for firearms, comprising: a magazine-body of substantially-rectangular form in cross section and provided with side-walls having inwardly-extending plate-supporting flanges extending but partway the lengths of the said side-walls, an adjacent end-wall of the magazine-body terminating at a point above the plane of the inwardly-extending plate-supporting flanges of the said side-walls a distance sufficient to accommodate a bottom-plate, the relation of the side-walls and the end-wall with respect to each other providing a releasing-gap opening angularly from the said magazine-body; a removable bottom-plate provided with a stop-abutment releasably engageable with a portion of the said magazine-body to releasably hold the said bottom-plate in place therein, one end of the said bottom-plate extending through the said releasing-gap and beneath the said end-wall which terminates above the plane of the said plate-supporting flanges; a cartridge-follower within the said magazine-body; and a follower-spring interposed between the said cartridge-follower and the said removable bottom-plate to yieldingly seat the latter against the said plate-supporting flanges; the said parts being constructed and arranged so that inward pressure upon a portion of the bottom-plate will tilt the said bottom-plate against the tension of the said follower-spring to clear the said stop-abutment from the said adjacent end-well and thereby permit the withdrawal of the said bottom-plate through the angularly opening releasing-gap in the said magazine-body.

FREDERICK L. HUMESTON.