

July 7, 1942.

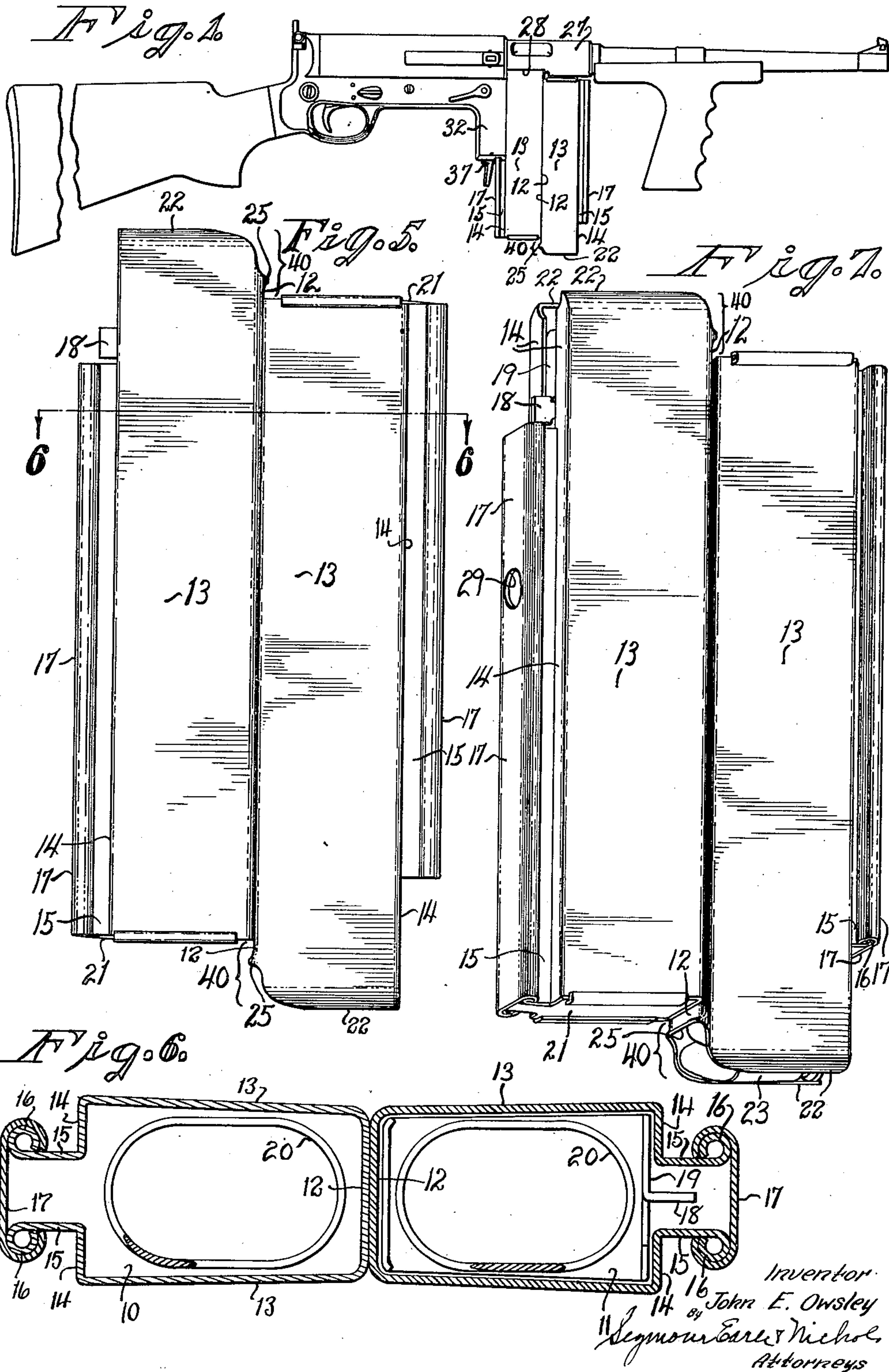
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BOX-MAGAZINE FOR FIREARMS

Filed Aug. 28, 1941

2 Sheets-Sheet 1



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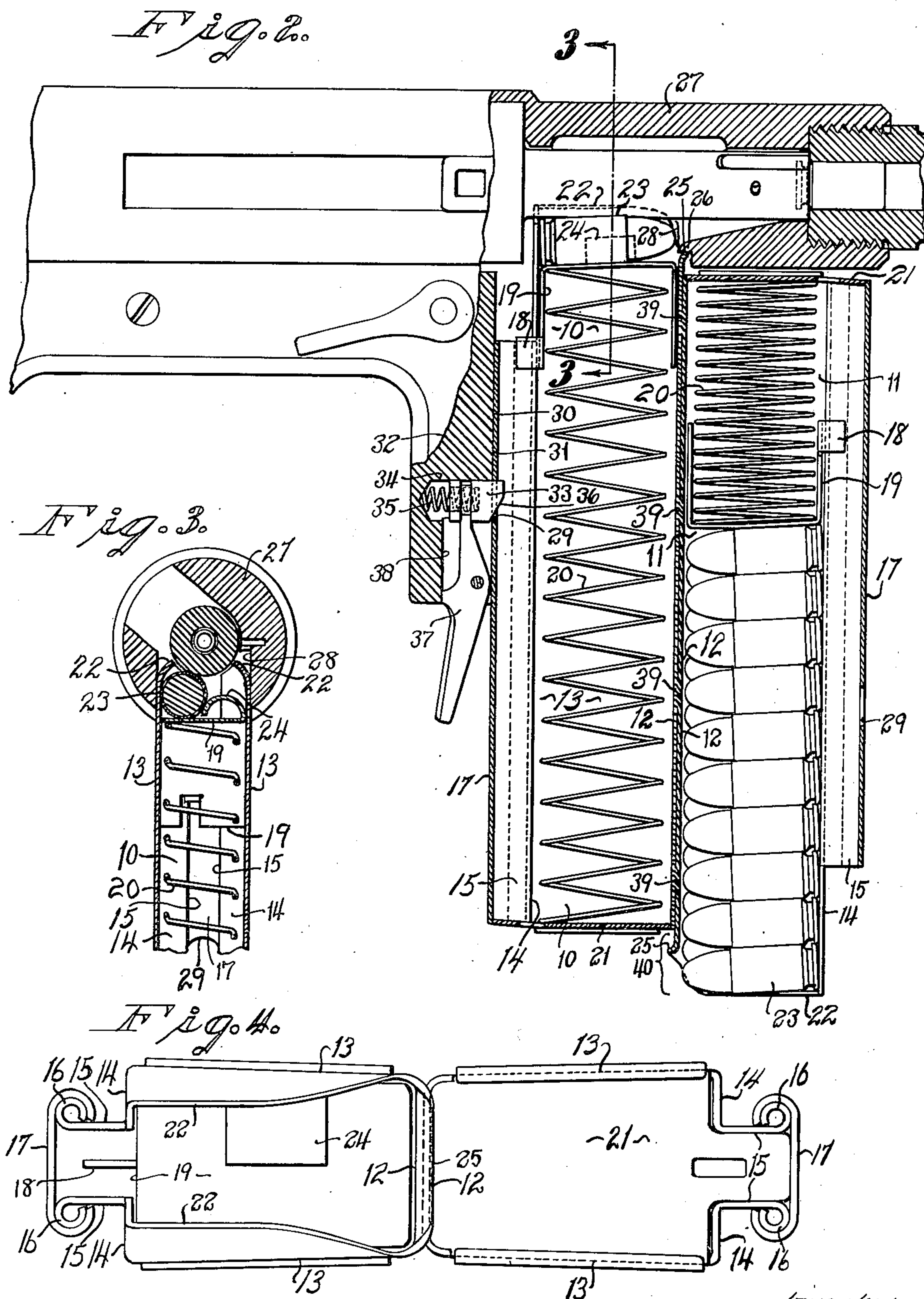
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BOX-MAGAZINE FOR FIREARMS

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6 Claims. (Cl. 42—50)

The present invention relates to improvements in box-magazines and more particularly to improvements in multi-compartment box-magazines for firearms.

One of the objects of the present invention is to provide a superior multi-compartment box-magazine which is readily shifted to bring either of its cartridge-compartments into cartridge-feeding relationship with respect to a repeating firearm.

Another object of the present invention is to provide a superior plural-compartment box-magazine in which two compartments are so related with respect to each other that when one thereof is in position for feeding cartridges to a firearm, the other compartment is in position whereby its loaded or empty condition may be ascertained at a glance.

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.

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

Fig. 1 is a view in side elevation of a repeating firearm equipped with a multi-compartment magazine embodying the present invention;

Fig. 2 is a broken view partly in side elevation and partly in central-longitudinal section of the portion of the automatic firearm adjacent the magazine-receiving opening therein and showing the multi-compartment box-magazine in section;

Fig. 3 is a broken sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is an end view of the magazine detached;

Fig. 5 is a view in side elevation of the magazine detached;

Fig. 6 is a transverse sectional view taken on the line 6—6 of Fig. 5; and

Fig. 7 is a perspective view of the magazine viewing the same partly from below.

The particular multi-compartment box-magazine herein chosen for purposes of illustrating the present invention, includes two vertical parallel cartridge-compartments 10 and 11 each preferably formed of sheet metal transversely folded into box-like form to provide a substantially-flat inner wall 12, integral complemental side-walls 13—13 and two laterally-spaced-apart integral outer-wall panels 14—14 each respectively turned inwardly from one of the side-walls 13—13 toward the other side-wall. Formed integral with

and respectively extending outwardly from the inner edge of each of the outer-wall panels 14—14 is one of two laterally-spaced-apart parallel side-wall panels 15—15 each formed at its outer end with one of two reversely-bent beads 16—16.

The side-wall panels 15—15 above referred to extend from the bottom of each vertical cartridge-compartment 10 and 11 to a point short of but adjacent the upper end of each of said compartments. The outer-wall panels 14—14, however, extend substantially the full length of each compartment.

Spanning the gap between each pair of complemental side-wall panels 15—15 above referred to and embracing the respective beads 16—16 thereof is a separately-formed outer wall 17 which may be conveniently formed of sheet metal. The said outer wall 17 is of a length substantially corresponding to the lengths of the complemental side-wall panels 15—15 to which it is rigidly attached by crimping.

The space between the laterally-spaced-apart side-wall panels 15—15 of each cartridge-compartment 10 and 11 provides a channel or runway for an actuating-finger 18 formed integral and bent rearwardly from a follower 19 which may be conveniently formed of sheet metal and which is of inverted U-shaped form. The said actuating-finger is designed to actuate a bolt-lock device employed in many types of firearms and not requiring detailed description or illustration herein.

Fitting within each of the cartridge-compartments 10 and 11 is one of two corresponding magazine-springs 20 thrusting at one end against the under face of its complemental follower 19 and thrusting at its opposite end against the inner face of a bottom-plate or end-wall 21, one of which is removably installed in one end of each of the cartridge-compartments 10 and 11.

Each of the side-walls 13—13 of each of the cartridge-compartments 10 and 11 is bent inwardly toward the complemental side-wall to provide oppositely-inclined cartridge-retaining lips 22—22, the respective under faces of which are alternately engaged by one of a series of cartridges being raised by the follower 19 under the urge of the magazine-spring 20. The particular box-magazine shown is adapted to contain two columns of cartridges such as the cartridges 23 and each follower 19 is bent or otherwise provided with a cartridge-positioning lug 24 which serves to laterally displace the first cartridge entered into the given magazine-compartment, toward

one side of the said compartment so that the next cartridge will in turn engage with the opposite wall of the compartment in a manner common in box-magazines. The inner wall 12 of each cartridge-compartment 10 and 11 at the end thereof adjacent the cartridge-retaining lips 22—22 is bent or otherwise curved slightly outwardly to provide a stop-lip 25. The stop-lip 25 of each cartridge-compartment overhangs the bottom-plate or end-wall 21 of the complementary cartridge-compartment and is adapted to engage with a downwardly-facing stop-abutment 26 formed in a firearm-receiver 27 immediately forwardly of the magazine-receiving passage 28 formed in the lower wall of the said receiver, as is particularly well shown in Figs. 2 and 3. The said magazine-receiving passage 28 extends lengthwise of the receiver 27 only a distance corresponding to the horizontal length of but one of the vertical cartridge-compartments 10 or 11. The stop-lip 25 of each cartridge-compartment also serves to facilitate the manual installation of cartridges into its complementary cartridge-compartment during the magazine-loading operation.

The outer wall 17 of each of the cartridge-compartments 10 and 11 is formed with a latch-receiving opening 29 and is adapted to have its outer face bear against the forwardly-facing rear wall 30 of a vertical magazine-guiding groove 31 formed in the receiver 27 to the rear of the magazine-receiving passage 28 therein. The groove 31 just above referred to is formed partly in the receiver 27 proper and partly in the forward portion of an integral lug 32 depending from the said receiver, as is shown especially well in Fig. 2. The latch-receiving opening 29 in each of the outer-end walls 17 is adapted to receive the forward end of a horizontally-reciprocating magazine-latch 33 movable in a forwardly-opening pocket 34 formed in the lug 32 and opening at its forward end into the vertical magazine-guiding groove 31. The said magazine-latch is constantly urged forwardly into latching position by a helical latch-spring 35 thrusting forwardly against the said magazine-latch 33 and rearwardly against the integral end-wall of the pocket 34. The lower forward portion of the magazine-latch 33 is formed with a rearwardly-and-downwardly-inclined bevel 36 to enable the said magazine-latch to be cammed rearwardly by the engagement of the upper edge of the outer wall 17 of either magazine-compartment 10 or 11, with the said bevel 36 of the magazine-latch. The magazine-latch 33 is adapted to be manually retired rearwardly to release the magazine, by means of a latch-operating lever 37 pivotally mounted in the lower portion of a vertical channel 38 formed in the lower end of the lug 32 and communicating at its upper end with the pocket 34 and at its forward end with the vertical magazine-guiding groove 31.

For the purpose of making the two complementary cartridge-compartments 10 and 11 into a unitary structure, the respective abutting inner walls 12—12 thereof are preferably spot-welded as at 39 in several vertically-displaced locations, as shown in Fig. 2. Before being secured together into a unitary structure, the cartridge-compartments 10 and 11 are reversed one with respect to the other and then positioned in parallelism so that the bottom-plate 21 of each cartridge-compartment is displaced "downwardly," so to speak, with respect to the adjacent cartridge-feeding

end of the complementary compartment. The degree of displacement is such that when the cartridge-feeding end of one cartridge-compartment is inserted into the magazine-receiving passage such as 28, the bottom-plate 21 or its equivalent of the other cartridge-compartment will be below the portion of the receiver 27 lying forwardly of the said magazine-receiving passage 28 therein. The portion of each cartridge-compartment 10 and 11 which projects longitudinally beyond the end-wall 21 of the companion cartridge-compartment constitutes in effect a "neck-portion" which, for convenience of description, is identified by the reference character 40.

The displacement of the respective cartridge-compartments 10 and 11 with respect to each other as above referred to, also serves to project the cartridge-delivery end of the particular cartridge-compartment not at the time in registry with the magazine-receiving passage 28, into position whereby the presence or absence of cartridges in the cartridge-delivery end of the now-inverted reserve cartridge-compartment, may be conveniently observed.

When the cartridges in one of the cartridge-compartments are exhausted, the multiple-compartment magazine may be detached from the firearm by manipulating the latch-operating lever 37 and inverted end-for-end by simple rotation in the plane of its normal position to project the cartridge-feeding end of the still-loaded cartridge-compartment into the magazine-receiving passage 28 of the firearm.

It is to be noted that the stop-lip 25 of each of the cartridge-compartments 10 and 11 in addition to acting as a stop to limit the penetration of its complementary cartridge-compartment into the cartridge-receiving passage 28 in the receiver 27, also acts in a funnel-like manner to assist in the guidance of cartridges being forced manually into the cartridge-feeding end of a cartridge-compartment, in the process of loading or charging the magazine.

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 multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments organized together into a unitary structure and arranged side by side in longitudinal parallelism and each cartridge-compartment having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end, the cartridge-feeding end of each of the said cartridge-compartments extending longitudinally beyond the end-wall of the other cartridge-compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm; a longitudinal division wall between each of the said cartridge-compartments; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

2. A multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments organized together into a unitary

structure and arranged side by side in longitudinal parallelism and each cartridge-compartment having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end, the cartridge-feeding end of each of the said cartridge-compartments extending longitudinally beyond the end-wall of the other cartridge-compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm, each of the said cartridge-compartments being provided with a stop-abutment located adjacent its cartridge-feeding end in a position intermediate the extreme of its said cartridge-feeding end and the adjacent end-wall of the other cartridge-compartment; a longitudinal division wall between each of the said cartridge-compartments; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

3. A multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments organized together into a unitary structure and arranged side by side in longitudinal parallelism and each cartridge-compartment having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end, the cartridge-feeding end of each of the said cartridge-compartments extending longitudinally beyond the end-wall of the other cartridge-compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm, each of the said cartridge-compartments being provided with an outwardly-flared stop-lip located adjacent its cartridge-feeding end in a position intermediate the extreme of its said end and the adjacent end-wall of the other cartridge-compartment, the stop-lip of a given cartridge-compartment overhanging the end-wall of the companion cartridge-compartment; a longitudinal division wall between each of the said cartridge-compartments; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

4. A multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments each having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end; each of the said cartridge-compartments including two complementary side-walls, an outer wall and an inner wall; the two said cartridge-compartments being arranged side by side in longitudinal parallelism with their respective inner walls adjacent and each thereof having its cartridge-feeding end extending longitudinally beyond the end-wall of the other compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm;

means securing the inner wall of one cartridge-compartment to the inner wall of the complementary cartridge-compartment; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

5. A multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments each having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end; each of the said cartridge-compartments including two complementary side-walls, an outer wall and an inner wall; the two said cartridge-compartments being arranged side by side in longitudinal parallelism with their respective inner walls adjacent and each thereof having its cartridge-feeding end extending longitudinally beyond the end-wall of the other compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm; means securing the inner wall of one cartridge-compartment to the inner wall of the complementary cartridge-compartment; each of the said cartridge-compartments being provided in its neck-portion in a position intermediate the extreme of its said cartridge-feeding end and the adjacent end-wall of the other cartridge-compartment with a stop-abutment; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

6. A multi-compartment box-magazine for firearms, comprising: two complementary cartridge-compartments each having an open cartridge-feeding end and an end-wall opposite the said cartridge-feeding end; each of the said cartridge-compartments including two complementary side-walls, an outer wall and an inner wall; the two said cartridge-compartments being arranged side by side in longitudinal parallelism with their respective inner walls adjacent and each thereof having its cartridge-feeding end extending longitudinally beyond the end-wall of the other compartment to provide a neck-portion for entry into the magazine-receiving passage of a firearm; means securing the inner wall of one cartridge-compartment to the inner wall of the complementary cartridge-compartment; each of the said cartridge-compartments being provided in its neck-portion with an outwardly-flared stop-lip overhanging the end-wall of the companion cartridge-compartment; and independent spring-means in each of the said cartridge-compartments and yieldingly urging a column of cartridges therein toward the cartridge-feeding end thereof.

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