

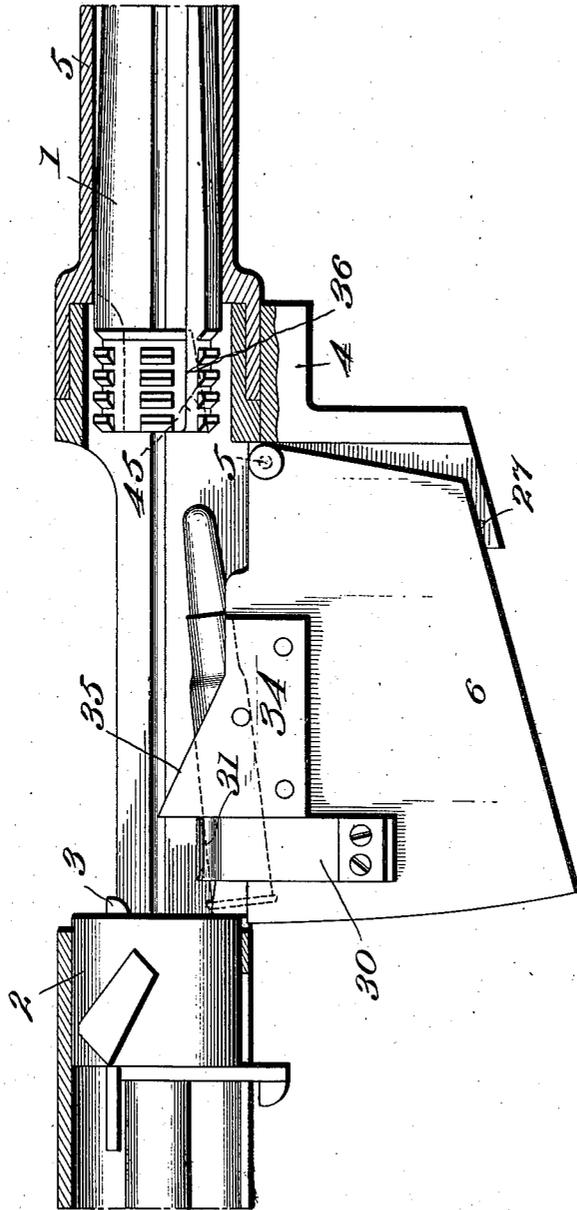
C. H. A. F. L. ROSS.  
MAGAZINE FOR FIREARMS.  
APPLICATION FILED MAR. 5, 1910.

975,287.

Patented Nov. 8, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



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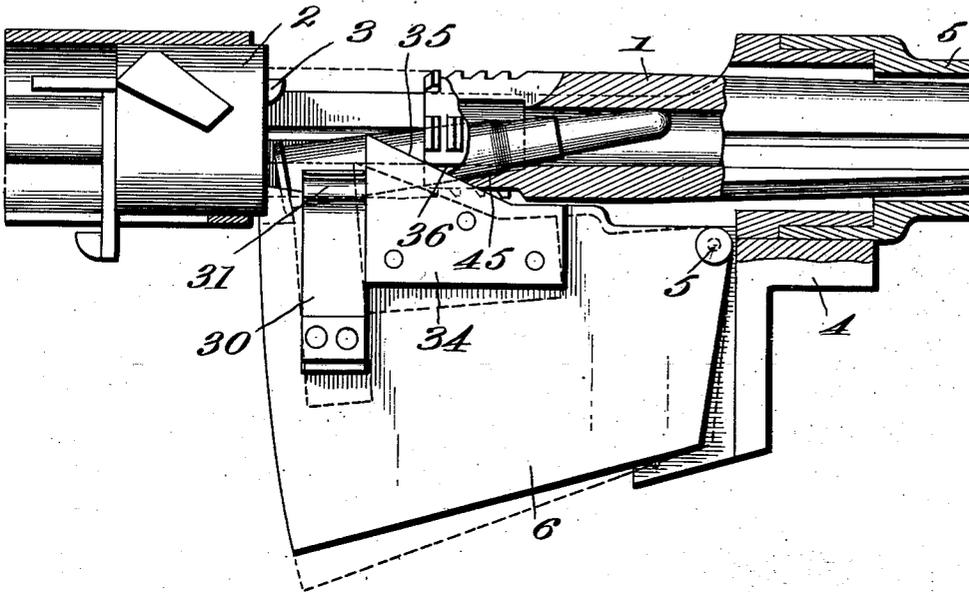
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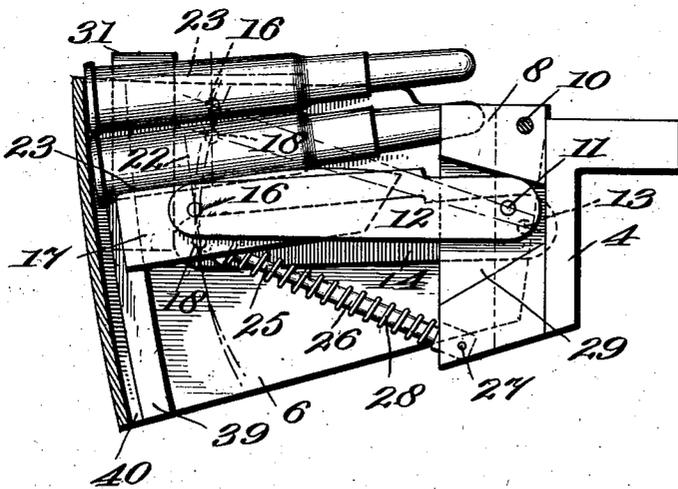
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3 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 3.*



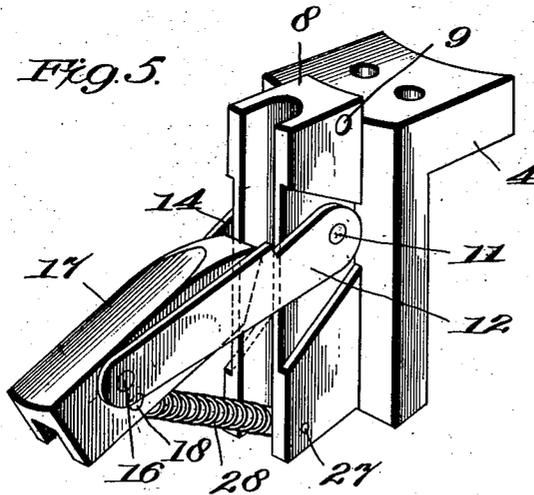
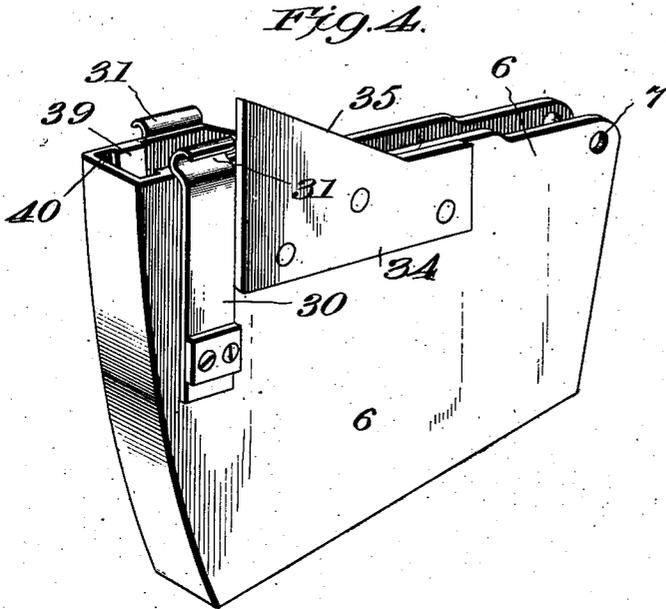
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

CHARLES H. A. F. L. ROSS, OF BALNAGOWN CASTLE, SCOTLAND.

## MAGAZINE FOR FIREARMS.

975,287.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed March 5, 1910. Serial No. 547,447.

To all whom it may concern:

Be it known that I, CHARLES H. A. F. L. Ross, a subject of His Majesty the King of Great Britain, residing at Balnagown Castle, Ross-shire, Scotland, have invented certain new and useful Improvements in Magazines for Firearms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to magazines for fire arms and has for its object to provide a magazine of this nature which will hold the cartridges firmly without chattering when moved up and down, will move them in planes substantially parallel to themselves, and present them in a position from which they can be with unerring certainty forced into the breech of the gun when they are to be loaded.

With this and other objects in view, the invention consists in the novel combinations of parts and in the details of construction more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification in which like numerals refer to like parts in all the views:—Figure 1 is a side elevational view partly in section of the breech portion of a gun provided with my invention; Fig. 2 is a view similar to Fig. 1 but showing the parts in a different position; Fig. 3 is a detail sectional view of the magazine proper; Fig. 4 is a perspective view of the magazine casing detached from the gun; and Fig. 5 is a perspective view of portions of the cartridge lifting mechanism.

1 represents any suitable reciprocating barrel, 2 any suitable reciprocating breech block, 3 the extractor, 4 a frame, and 5 a barrel casing fitting said frame.

The above parts may be of any suitable construction and form in themselves no part of the present invention.

To the frame 4 is pivoted as at 5 a casing 6, best shown in Fig. 4, and provided with the pivot holes 7. The frame 4 is provided with a lug 8 having a hole 9 adapted to register with the holes 7, and to accommodate the pivot 10 of the casing 6, see Fig. 3.

To the lug 8 is pivoted at 11 an arm 12, and on the opposite side of said lug 8 is pivoted at 13 a similar arm 14. It will be observed that the pivots 11 and 13 do not

register with each other as is plainly shown in Fig. 3. The arm 12 is also pivoted as at 16 to the lifter 17, and the arm 14 is pivoted as at 18 to the said lifter. It will also be observed that the pivots 16 and 18 do not register.

It results from the structure now disclosed that the arms 12 and 14 are free to swing around the pivots 11 and 13 as centers. And these two centers being located eccentrically to each other, it necessarily results that the pivots 16 and 18 will move in circles which are eccentric to each other. But since the lifter 17 is pivoted at 16 and 18 to the arms 12 and 14, respectively, it cannot swing around said pivots 16 and 18, and it is accordingly firmly held between the arms 12 and 14. The said lifter, however, may swing parallel to itself until the pivots 16 and 18 reach the positions, as indicated in dotted lines in Fig. 3. In other words, since the pivots 16 and 18 move in circles which nearly coincide and are located one above the other along the line 22, which is substantially perpendicular to the top edge 23 of the lifter, the line 22 will still remain substantially perpendicular to the top edge 23 of the lifter 17 when the pivots reach the dotted line positions as indicated. That is to say, the structure so far disclosed provides a lifter 17 which is rigidly held against turning between two arms 12 and 14, and which is capable of a revolving motion around the pivot 11 while all the time remaining substantially parallel to itself. It further results that the cartridges supported on said lifter move upward with the same and substantially parallel to themselves on a rigid platform so that no matter how sudden the motion there is an absence of any chattering or wobbling of the extreme points of the bullets. To the lifter 17 is also pivoted as at 18 the rod 25 telescoping in the tube 26 which is pivoted to the lug 8 as at the point 27. A spring 28 surrounds the rod 25 and tube 26 and, therefore, normally forces the lifter 17 upwardly. The lug 8 may be suitably cut away as at 29 to accommodate the arm 12 and a similar cut away place may be provided on the opposite side for the arm 14. Secured to the casing 6 are springs 30 which are bent over as at 31 to engage the cartridges and hold them in the said casing, and the spring 26 normally forces the topmost cartridge up against the clip portions 31 of the springs 30. The spring 28, there-

fore, presses upwardly the lifter 17, the cartridges, the clips 31 and casing 6, tending to revolve the latter around its pivot 5. After the said casing 6 has moved upwardly a distance sufficient for the barrel 1, during its rearward motion, to pick up a cartridge as indicated in Fig. 2, the said casing is too high to permit the continued rearward motion of the barrel and allow the latter to interlock with the breech block 2. Therefore, in order to automatically move the casing 6 out of the way of the barrel it is provided with the cam piece having a cam surface 35 which is engaged by a straight surface 36 on the barrel during the latter's rearward motion, see Figs. 1 and 2. The surface 36 on the barrel upon striking the inclined surface 35 of the magazine casing forces the latter downward into the dotted line position shown in Fig. 2 and thereby compresses the spring 28. In the meantime the pointed end of the cartridge enters the rear end of the barrel, and the rear end of the cartridge is forced from between the spring clips 31 and into the barrel as will be readily understood. The casing 6 is preferably further provided with guide pieces 39 upon the inside and with the guide slots 40 to accommodate the rims of the cartridges.

The mechanism for automatically returning the barrel after firing and for disengaging the breech bolt is not herein illustrated as any suitable means may be employed to perform these functions.

It is convenient to provide the breech opening of the barrel with an inclined surface such as 45 located below the bore proper in order to accommodate the pointed ends of the cartridges.

The operation of the mechanism will be clear from the foregoing, but may be briefly summarized as follows:—Upon firing a cartridge the magazine being in the position indicated in dotted lines in Fig. 2, the barrel goes forward and the spring 28 forces the casing 6 together with the cartridges therein upward into the full line positions shown in Figs. 1 and 2. During this motion the arms 12 and 14 swing independently on their pivots 11 and 13 and the lifter 17 moves upwardly parallel to itself furnishing a firm foundation for the cartridges thereby avoiding any shaking or wobbling of the ends of the same. The barrel now having moved forward sufficiently a new cartridge is brought into position in the path the barrel will take upon its counter recoil, and as the barrel returns it picks up the topmost cartridge as indicated in Fig. 2, forces its rear end from between the clips 31, and simultaneously causes the surface 36 to contact with the cam surface 35 and force the casing 6 downward again into the dotted line position shown in Fig. 2. As the top-

most cartridge is removed from between the clips 31 the spring 28 forces the lifter 17 upwardly parallel to itself and with it the other cartridges until the topmost remaining cartridge contacts with the clips 31. These actions are repeated as long as cartridges are fired.

It is evident that instead of carrying loose cartridges in the magazine, as illustrated, cartridges contained in the well known clips may be loaded into the magazine by simply forcing the clip portion down through the slots 40, whereupon the cartridges will occupy the same relative positions as those indicated.

It is obvious that those skilled in the art may vary the details of construction and the arrangement of parts without departing from the spirit of my invention and, therefore, I do not wish to be limited to such features except as may be required by the claims.

What I claim is:

1. In a magazine for fire arms, the combination of a support, a pair of arms pivoted to said support; and a cartridge lifter pivoted between said arms on independent pivots eccentrically located with relation to each other, substantially as described.

2. In a magazine for fire arms, the combination of a support; a pair of arms pivoted to said support; a cartridge lifter having non-aligning pivots between said arms; and a spring adapted to move said lifter and arms, substantially as described.

3. In a magazine for fire arms, the combination of a support; a pair of arms provided with non-registering pivots for said support; a cartridge lifter pivoted between said arms, and rigidly held against rotation on its own axis; and a spring for normally elevating said lifter and arms, substantially as described.

4. In a magazine for fire arms, the combination of a support; a pair of arms provided with non-registering pivots for said support; a lifter rigidly held against rotation on its own axis between said arms but adapted to move up and down substantially parallel to itself; and a casing in which said lifter is located, substantially as described.

5. In a magazine for fire arms the combination of a support; a pair of arms pivoted to said support; a lifter provided with non-registering pivots in said arms and rigidly held against rotation on its own axis between said arms but adapted to move up and down substantially parallel to itself; and a casing pivoted to said support in which said lifter is located, substantially as described.

6. In a magazine for fire arms, the combination of a lifter; means for causing said lifter to move parallel to itself a pivoted casing in which said lifter is located; and

means carried by said casing adapted when struck by a recoiling part of the gun to rotate the same on its pivot, substantially as described.

5 7. In a magazine for fire arms, the combination of a lifter; means for mounting said lifter comprising a pair of arms provided with independent pivots at one end; means for causing said lifter to move parallel to  
10 itself, comprising independent non-registering pivots passing through the other end of said arms and lifter; a pivoted casing in which said lifter is located; and means carried by said casing adapted when struck by  
15 a recoiling part to rotate the same on its pivot, substantially as described.

8. In a magazine for fire arms, the combination of a casing provided with a cam surface; a pivot for said casing; spring clips  
20 for holding cartridges carried by said casing; and a cartridge lifter located in said

casing adapted to press the topmost cartridge against said clips, the parts being so arranged that the topmost cartridge may be  
25 picked up upon the movement of the barrel to the rear and forced from between said clips while the said casing is being moved on its pivot, substantially as described.

9. A magazine for fire arms, provided with a casing having a pivot; a cam surface  
30 adapted to be struck by a recoiling part to cause said casing to turn on said pivot; a clip against which cartridges may be pressed; a guide rib 39 and a slot 40, substantially as described. 35

In testimony whereof, I affix my signature, in presence of two witnesses.

CHARLES H. A. F. L. ROSS.

Witnesses:

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