

Dec. 30, 1924.

B. A. REVELLI

1,521,324

MAGAZINE FOR FIREARMS

Filed July 10, 1923

2 Sheets-Sheet 1

Fig. 6.

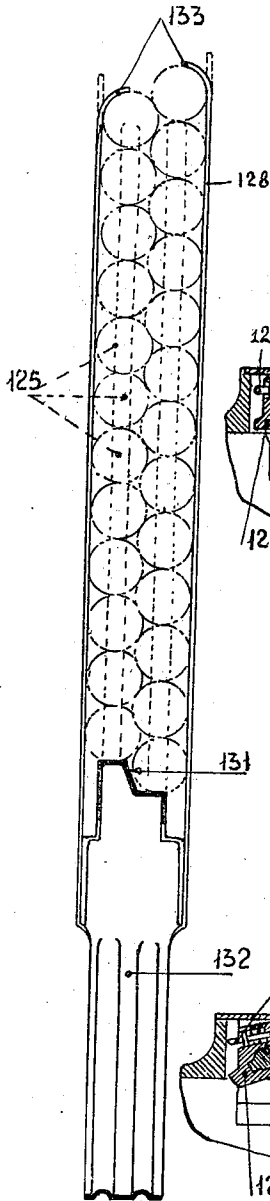


Fig. 1.

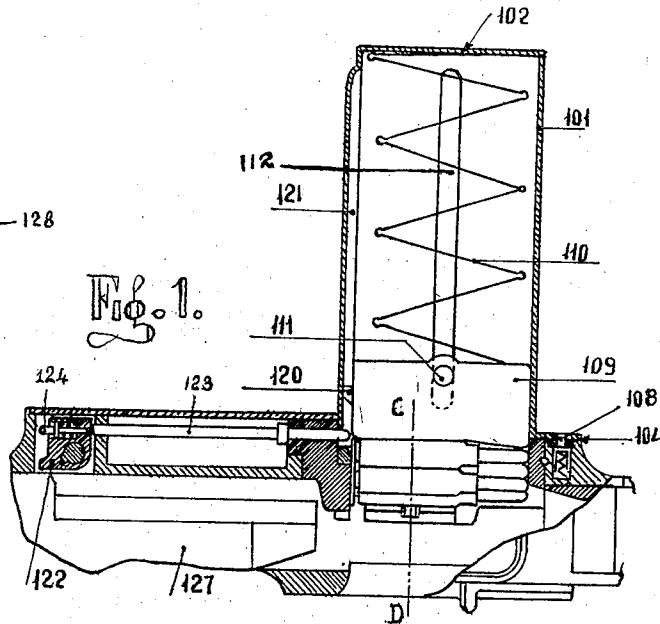
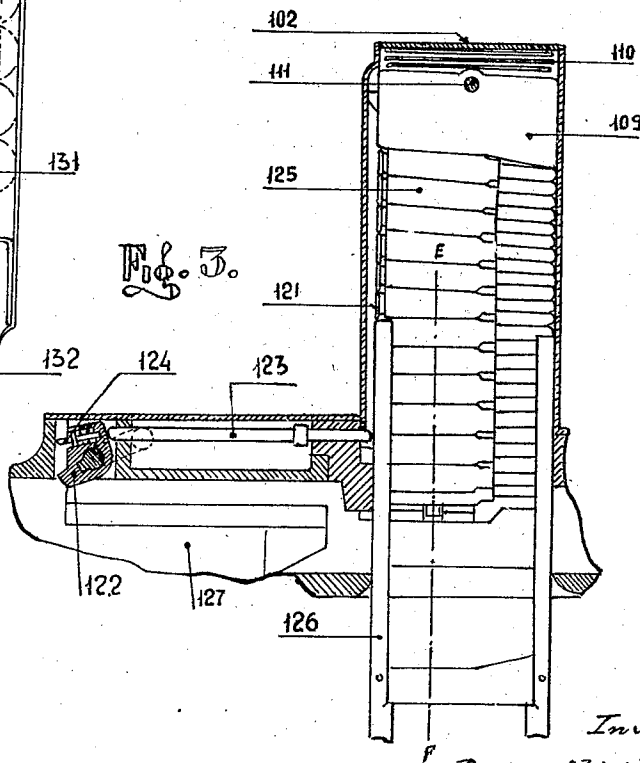


Fig. 3.



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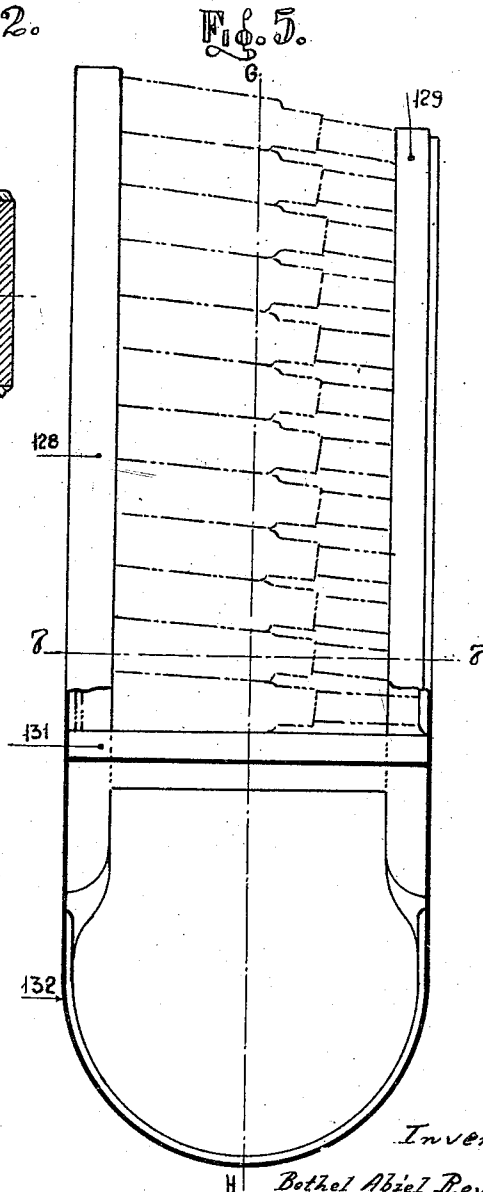
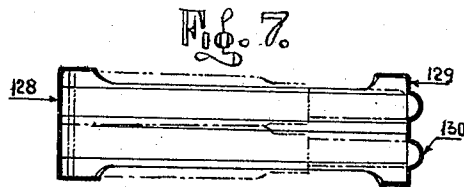
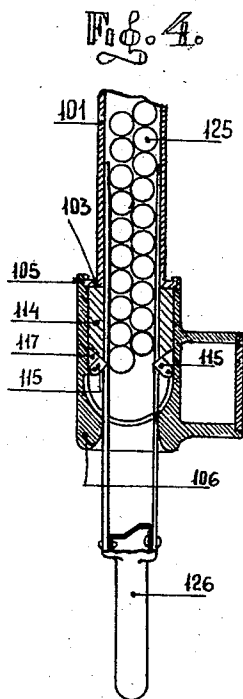
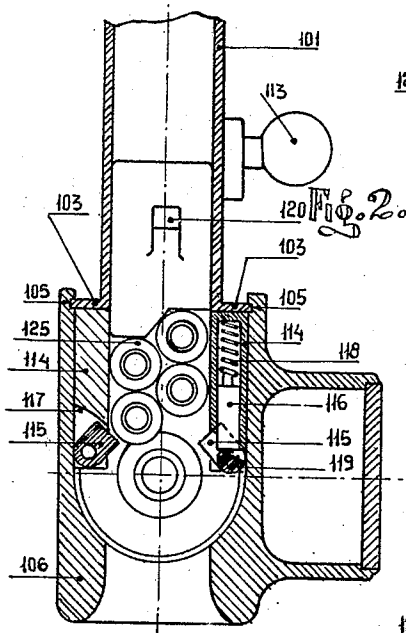
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Inventor:
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UNITED STATES PATENT OFFICE.

BETHEL ABIEL REVELLI, OF TURIN, ITALY.

MAGAZINE FOR FIREARMS.

Application filed July 10, 1923. Serial No. 650,665.

To all whom it may concern:

Be it known that I, BETHEL ABIEL REVELLI, subject of the King of Italy, residing at 57, corso Duca di Genova, Turin, Italy, have invented certain new and useful Improvements in Magazines for Firearms, of which the following is a specification.

This invention has reference to a system of feeding cartridges to machine guns with retaining lips and a follower or feeder and which offers the following advantages:—

(a) A fixed magazine, strong and not liable to distortion into which the cartridges can be introduced rapidly and accurately during the working of the weapon without any inconvenience.

(b) For the filling of the magazine I employ clips, holders or the like of light metal or cardboard or other cheap material or I may even use envelope fillers which may be used for an indefinite period of time.

(c) I avoid automatically operated mechanical filling devices, which as is well known, are the most delicate parts of a machine gun.

The magazine may be fixed to the weapon so as to be capable of being easily and rapidly detached for cleaning purposes, or for the purpose of emptying it when the breech is closed. The filling will be performed through a suitable opening in the movable breech by means of an envelope filler which can be used for successive fillings.

The accompanying drawings show, by way of example, a diagrammatic constructional form of the apparatus according to the invention.

Figure 1 is a longitudinal axial section of the magazine and the adjacent parts of the machine gun.

Figure 2 is a partial section on a larger scale, on the line 2—2 of Figure 1.

Figure 3 is a similar section to the one shown in Figure 1 the magazine being shown in the act of being filled.

Figure 4 is a partial section on the line 4—4 of Figure 3.

Figure 5 is an elevation, partially in section, of the filler.

Figure 6 is a section thereof on the line 6—6 of Figure 5, and

Figure 7 is a section thereof on the line 7—7 of Figure 5.

Referring more particularly to the drawings, 101 indicates the magazine of the ma-

chine gun, consisting substantially of a box shaped like a parallelepiped closed at the top by a cover 102 (which may be integral with the box 101 as in the example illustrated, or removable) and provided at its inner or lower end with side flanges 103 and a front flange 104. The side flanges 103 are adapted to work in longitudinal grooves 105 formed in the body of the movable breech 106 while the front flange 104 is provided with a hole into which a spring controlled tooth 108 mounted in a recess in the movable breech, enters when the magazine is pushed over the loading opening of the weapon.

In the magazine is mounted the feeder 109 operated in the well known manner by the spring 110 and mounted to oscillate on the pivot 111 projecting outwards through the longitudinal slot 112 and carrying on this projecting part a knob 113. In order to prevent dust or foreign bodies from penetrating into the magazine the slot 112 may be conveniently protected by a cover integral with the knob 113 or by any other appropriate means.

Underneath the mouth of the magazine are arranged in the body of the movable breech, two side blocks 114 forming an extension of the magazine and carrying at their lower ends stops for the cartridges. The said stops (see Figure 2) consist of pawls 115 pivoted in suitable slots 117 in the blocks 114 and caused to project towards the interior by plungers 116 pressed by springs 118 against the flat face of extensions 119 of semicylindrical section integral with the said pawls. The plungers 116 and the corresponding springs 118 are contained in holes formed lengthwise of the blocks 114. The slots 117 are formed so as to permit of the complete disappearance of the pawls 115 when the filler is introduced into the magazine and to return and hold the cartridges when the filler is extracted from the magazine.

The feeder 109 carries at its rear a projection 120 which enters a longitudinal groove 121 formed in the rear part of the magazine, said projection serving to operate the cocking tooth 122 of the breech block 127 after the firing of the last cartridge. For this purpose there is mounted in the body of the movable breech a rod 123 one end of which projects into the lower part

of the groove 121 while the other end is in contact with the cocking tooth 122 provided with a spring tooth 124 which brings it back to the position of rest with the rod.

The magazine is filled by the filler 126 (see Figure 3). This filler or clip (see Figures 5-7) consists of a fork having a rear limb 128 and a front limb 129 provided with longitudinal grooves 130 and the bridge 131 on which the rows of cartridges 125 rest. The curved portion 132 of the fork below the bridge 131 acts as a manipulating handle and is suitably shaped so as to offer an easy and convenient grip. The ends 133 of the lips of the members 128 and 129 may be bent as shown in full lines in Figure 6 so as to hold the rows of cartridges in place or the lips may be straight as shown by dotted lines in Figure 6. In the first case naturally the ends 133 must be provided with springs so as to resume their original position as soon as the last cartridges have emerged from the filler.

The apparatus works as follows:—

The cartridges 125 having been placed in the filler 126 this latter is introduced into the loading mouth or opening of the weapon and pushed into the magazine against the action of the spring 110.

The filling may be facilitated by raising the feeder 109 by hand by means of the knob 113. During this operation the pawls 115 will be brought into contact with the sides of the cartridges and will be forced back into the slots 117 and will consequently not offer any obstacle to the introduction of the filler. When the row of cartridges has passed the pawls, the filler may be withdrawn, the cartridges being held in the magazine by the pawls which, by the action of the plungers 116, again protrude from the slots 117. During the firing of the gun the cartridges will be thrust one at a time in the well known way into the barrel, by means of the breech block, and the pile will consequently descend in the magazine guided in its movement by the feeder 109, which being pivoted exerts uniform pressure on the head of the pile avoiding irregularities in the movement of the cartridges. When the last cartridge has been fired the projection 120 enters into engagement with the rod 123 which moves the tooth 122 into the cocked position so that the breech block stops in the open position in which it can be locked by any known device so as to allow the magazine to be refilled again.

When for any reason the magazine has to be emptied, this operation may be carried out by operating at the head or top of the magazine by taking off the cover 102 if it is removable, or at the bottom by detaching the magazine from the weapon. For this purpose the flange 104 is disengaged from

the tooth 108 by forcing the latter downwards and the magazine is then pulled out of the grooves 105.

What I claim is:—

1. Cartridge-feeding mechanism for fire arms embodying a breech portion and a breech block, comprising side blocks mounted in said breech portion at opposite sides of the filling opening; a magazine detachably mounted on said side blocks; a fork-shaped cartridge clip adapted to be inserted through said filling opening into the magazine and then withdrawn, leaving the cartridges in the magazine; pawls carried by the side blocks for holding the cartridges in place after the clip has been withdrawn, said pawls moving backward into inoperative position during the insertion of the clip; and means for automatically locking the breech block in its open position when the last cartridge has been fired.

2. In cartridge-feeding mechanism for fire arms, the combination of side blocks mounted in the breech of the weapon at opposite sides of the filling opening; a magazine mounted on said blocks; a cartridge clip adapted to be inserted through said opening into the magazine and then withdrawn, leaving the cartridges in the magazine; and pawls carried by the side blocks for holding the cartridges in place after the clip has been withdrawn, said pawls moving backward into inoperative position during the insertion of the clip.

3. In cartridge-feeding mechanism for fire arms, the combination of side blocks mounted in the breech of the weapon at opposite sides of the filling opening; a magazine mounted on said blocks; a cartridge clip adapted to be inserted through said opening into the magazine and then withdrawn, leaving the cartridges in the magazines; pawls carried by the side blocks; and spring-loaded plungers acting upon the pawls to force them into a position in which they project into said opening so as to retain the cartridges in place after the clip has been withdrawn, said pawls being forced backward out of such position during the insertion of the clip.

4. Cartridge-feeding mechanism, according to claim 3, in which the plungers are also carried by the side blocks; and in which the pawls have flat-faced projections against which said plungers directly bear.

5. Cartridge-feeding mechanism, according to claim 3, in which the side blocks have longitudinal recesses wherein the spring-loaded plungers are mounted, and also have slots wherein the pawls are pivotally mounted, said slots leading into the filling opening; and in which said pawls have flat-faced projections against which said plungers directly bear.

6. Cartridge-feeding mechanism for fire

arms embodying a breech portion and a breech block, comprising a magazine adapted to be positioned in line with the filling opening; a feeder movable in the magazine
 5 and having a projection; a cocking tooth for locking the breech block in its open position; and a member engageable by said projection to operate said tooth when the feeder reaches its lowest position in the
 10 magazine.

7. Cartridge-feeding mechanism for fire arms embodying a breech portion and a breech block, comprising side blocks mounted in said breech portion at opposite sides
 15 of the filling opening; a magazine mounted on the side blocks; a cartridge clip adapted to be inserted through said filling opening and then withdrawn, leaving the cartridges in the magazine; means carried by the side
 20 blocks for retaining the cartridges in place during and after withdrawal of the clip; a feeder movable in the magazine and having a projection; a cocking tooth for locking the breech block in its open position;
 25 and a member engageable by said projection to operate said tooth when the feeder reaches its lowest position in the magazine.

8. Cartridge-feeding mechanism for fire arms embodying a breech portion and a
 30 breech block, comprising side blocks mounted in said breech portion at opposite sides of the filling opening; a magazine mounted on the side blocks; a cartridge clip adapted to be inserted through said filling opening and then withdrawn, leaving the cartridges
 35 in the magazine; means carried by the side blocks for retaining the cartridges in place during and after withdrawal of the clip; a feeder movable in the magazine and hav-

ing a projection; a cocking tooth for lock- 40
 ing the breech block in its open position; and a slidably-mounted operating rod for said tooth bearing at one end against the same and having its other end disposed in the path of movement of said projection to
 45 be engaged by the latter when feeder reaches its lowest position in the magazine.

9. In cartridge-feeding mechanism for fire arms embodying a breech portion and a breech block, said breech portion being
 50 provided with opposite guide grooves and with a cavity, a magazine having side flanges slidably engaged in said grooves and also having a perforated front flange, said magazine being formed with a longitudinal
 55 slot in one of its vertical side walls; a spring-loaded detent mounted in said cavity for engagement in the perforation in said front flange; a feeder in said maga-
 60 zine; a control-spring therefor; and a pivot in the magazine whereon said feeder is mounted having one end projecting outward through said slot and provided with an operating knob.

10. In cartridge-feeding mechanism for 65
 fire arms, a magazine, and a cartridge clip adapted to be inserted into and withdrawn from the magazine; said clip comprising a pair of oppositely-located branches having
 70 inbent lips at their outer ends to retain and guide the cartridges, a bridge connecting the inner ends of said branches and whereon the pile of cartridges rests, and a curved
 75 portion below said bridge also connecting the said inner ends of the branches and forming a manipulating handle.

In testimony whereof I affix my signature.

BETHEL ABIEL REVELLI.