J. M. BROWNING.

FIREARM.

APPLICATION FILED JULY 28, 1920.

1,381,448. Patented June 14, 1921.

FIG. 1.

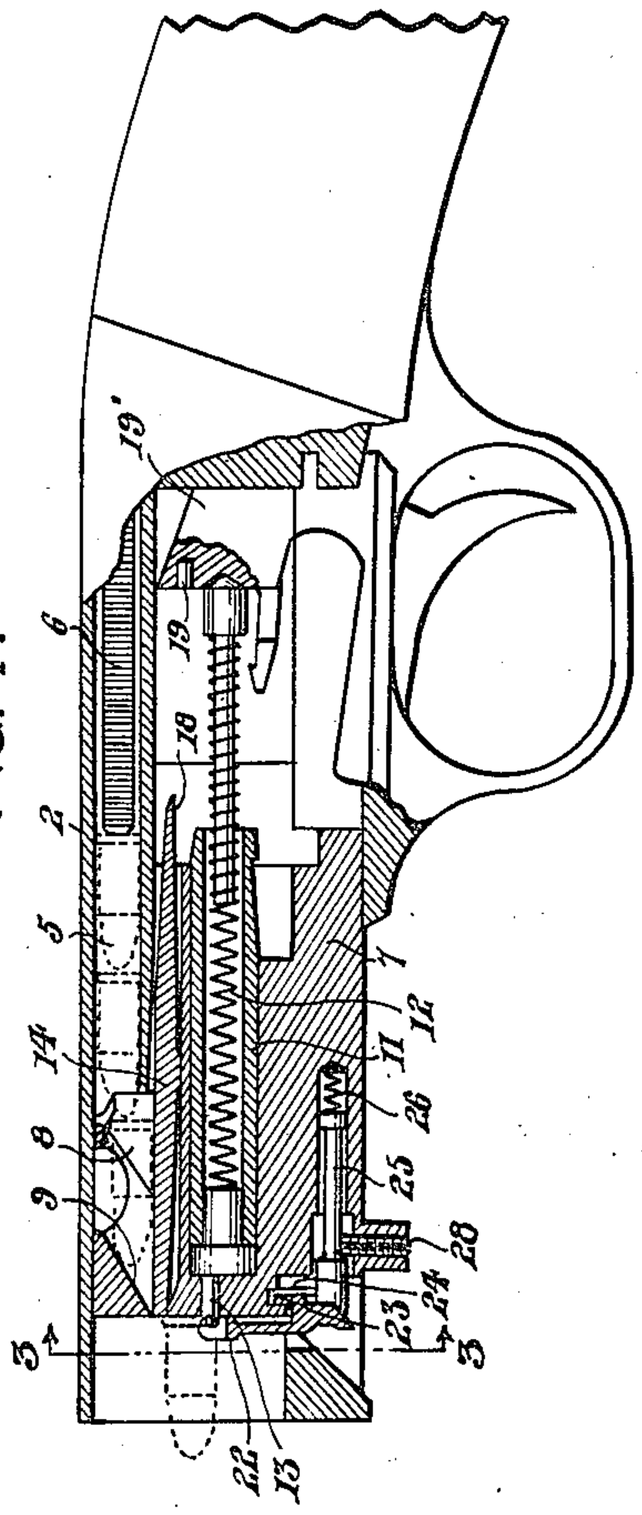


FIG. 2.

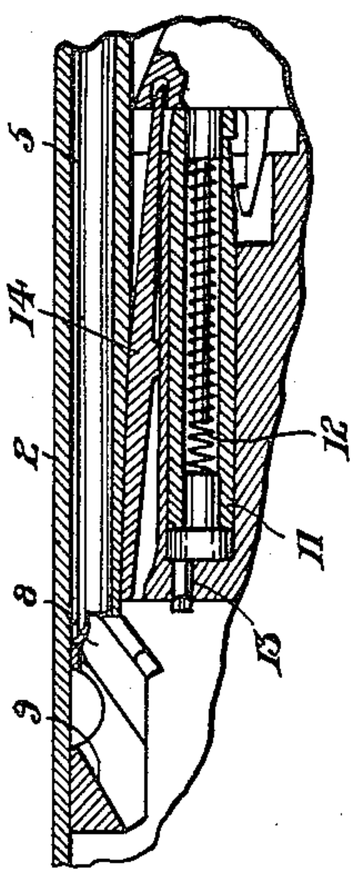


FIG. 5.

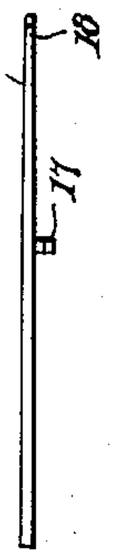


FIG. 6.

FIG. 3.

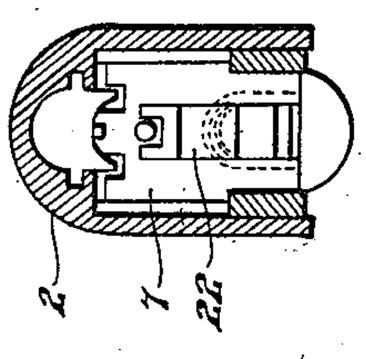
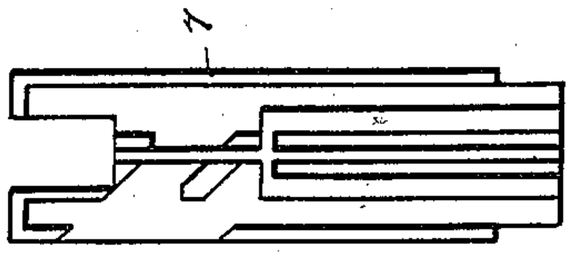


FIG. 4.



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UNITED STATES PATENT OFFICE.

JOHN M. BROWNING, OF OGDEN, UTAH.

FIREARM.

1,381,448. Specification of Letters Patent. Patented June 14, 1921.

Original application filed April 27, 1920, Serial No. 376,922. Divided and this application filed July 28, 1920. Serial No. 399,545.

To all whom it may concern:

Be it known that I, JOHN M. BROWNING, a citizen of the United States, residing at Ogden, in the county of Weber and State of Utah, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

This invention while applicable to different kinds of firearms is more particularly intended to be adapted to 22 caliber rim-fire greased cartridges. In this case I use a cartridge guide with double cam, one for the bullet and one for the rim of the cartridge the same as in my Patent No. 1,083,384 of January 16, 1914. It, however, happens occasionally in cold weather in using greased cartridges that the column of cartridges is not pushed forward quickly enough when the breech-bolt moves back of the head of the first cartridge, with the result that the breech-block comes forward under the cartridge head and fails to push it into the chamber. To obviate this difficulty, I employ improved mechanism for picking up the first cartridge and pushing it into the chamber whether the magazine spring moves it forward or not.

Referring to the drawings:

Figure 1 is a sectional side elevation of the frame, action and certain adjunctive members of a rifle involving the invention, the parts being shown advanced.

Fig. 2 is a practically similar view of the principal elements of Fig. 1, with the movable parts in retracted or backward position.

Fig. 3 is a cross section on the line 3—3 of Fig. 1 looking toward the right.

Fig. 4 is a top plan view of the breech block.

Fig. 5 is a top plan view, and

Fig. 6 is a side elevation of a pusher.

Like characters refer to like parts throughout the several views.

The frame or receiver of the gun, is denoted by 2 and it is generally speaking, like that shown in the Letters Patent hereinbefore mentioned. The magazine comprises a passage 5, into which the cartridges are inserted and fed automatically therealong by the flexible follower 6 the forward end of which engages the rearmost cartridge to advance the line of cartridges along the passage for subsequent introduction into the chamber of the barrel. In the frame or receiver 2, is the breech-block 7, the backward motion of the breech-block being brought about by the pressure of the gases generated during firing, while forward movement thereof is effected by the recoil spring (not shown). The firing pin is denoted by 11 and its spring by 12, the firing pin having a point 13, which strikes the cartridge.

After the foremost cartridge passes from the passage 5, it engages the cam surfaces 8 and 9, and, as it falls, is directed thereby into the path of the breech-block 7 which then inserts it into the chamber of the barrel. This is the normal action, but there may be cases, however, as I have already noted, in which the cartridge does not get into the path of the breech-block. To insure this latter result under all conditions, I provide means of a positive nature by which the foremost cartridge when out of the magazine passage is pushed forward positively into the path of the breech-block.

As shown this means is in the form of a pusher 14 oscillatory on the upper side of the breech-block, which has a longitudinal channel to receive the pusher, the latter having about its central under side the lug 16 which engages the bottom of the channel. In addition to this the pusher has a lateral extension 17 which fits a cut in the side of the breech-block and thus prevents endwise movement of the pusher with respect to the breech-block. The rear end of the pusher is shown as tapered or pointed as at 18 which is adapted to enter an opening 19 in the lug 19′ of the trigger plate, the upper surface of the tail part of the pusher having a cam surface 20 to cause the upward tip of the forward end of the pusher when the tail thereof enters the opening 19.

It will be assumed that the breech-block 7 is moved backward by recoil and that its forward end is back of the head of the front cartridge of the row, said front cartridge having just emerged from the passage 5. In Fig. 2 the breech-block is shown as all the way back, the pusher having been caused to be moved to its operative position. When, therefore, the breech-block is advanced, the pusher will strike the head of the first cartridge, then out of the passage 5, and will positively cause said first cartridge to be guided downward by the cam surfaces 8 and 9 into the path of the breech-block.

The extractor is denoted by 22 and it has a lug 23 loosely fitting a cut 24 in the front

end of the breech-block. The extractor 22 is supported by the front end of the plunger 25 loosely fitting a socket in the breech-block and engaged by the spring 26 to hold the front cam end of the plunger against the lower cam surface of the extractor. An examination of the drawings, will show clearly that this thrust of the plunger 25 against the cam surface of the extractor 22, while holding the extractor yieldingly in its upward position also holds the upper end of the extractor yieldingly against the face of the breech-block. When the breech-block is in its advanced position the upper end of the extractor engages the rim of the cartridge in the usual manner. When the point 13 of the firing pin strikes the cartridge the roughened end of the point will be slightly embedded and the extractor will with the point clamp jointly the shell to insure the shell being withdrawn from place. As the breech-block moves backward during which time the cartridge is gripped by the extractor and the firing pin, it comes in contact with the downward depending shoulder 27 at which time it is turned on the point of the extractor and discharged positively from the receiver.

Through the breech-block 7 is tapped the screw 28 the upper end of which engages the plunger 25 so that when necessary the extractor may be adjusted vertically through the action of the screw engaging the plunger and effecting corresponding movements of the extractor.

The present application is a division of that filed by me April 27, 1920 under Serial Number 376,922.

What I claim is:

1. A fire arm comprising a frame, a breech-block, a magazine having means to guide the cartridge toward the barrel, a trigger plate, a pusher on the breech-block, and means on the trigger plate for operating the rear end of the pusher to tip down the back end and thus cause the front end of the pusher to tip up and engage the cartridge which has just emerged from the magazine and push it into the path of the breech-block.

2. A firearm comprising a frame, a breech-block supported for sliding forward and backward movement by the frame, a magazine having means to guide the cartridge toward the barrel, a trigger guard, a pusher on the breech-block, and means on the trigger guard for operating the rear end of the pusher to condition it to engage the cartridge which has just emerged from the magazine and push it into the path of the breech-block.

3. A firearm comprising a frame, a breech-block, a magazine having means to guide the cartridge toward the barrel, a pusher supported by the breech-block and extending rearwardly beyond the rear end of the breech-block, and means for engaging the rear end of the pusher on the backward movement of the breech-block to condition the pusher to pick a cartridge from the magazine and to cause the cartridge thus picked up to move into the path of the breech-block.

4. A firearm comprising a frame, a magazine having means to guide the cartridge toward the barrel, a breech-block, a trigger guard, a cartridge pusher, the breech-block having a channel in its upper side in which the cartridge pusher is movably mounted, the rear end of the cartridge pusher extending beyond the rear end of the breech-block, and cam means on the trigger guard for conditioning the pusher to push the cartridge which has just emerged from the magazine into the path of the breech-block.

5. A fire arm comprising a frame, a breech-block, a magazine having a passage situated above the breech-block, an oscillatory pusher on the breech-block, a trigger plate and means on the trigger plate to condition the pusher when the breech-block is in its backward position, for pushing the cartridge which has emerged from the magazine into the path of the breech-block.

6. A firearm comprising a frame, a breech-block, a magazine having a passage for the cartridge, situated above the breech-block, a trigger guard, a cartridge pusher movably supported by and on the upper portion of the breech-block, and means on the trigger guard for operating the rear end of the pusher to tip down the back end and thus cause the front end of the pusher to tip up and engage the cartridge which is just emerged from the magazine and push it into the path of the breech-block on the forward movement thereof.

7. A fire arm comprising a frame, a breech-block, a magazine having a passage for the cartridge, situated above the breech-block, a trigger plate, a cartridge-pusher supported for oscillation between its ends by the breech-block, and means on the trigger plate, for imparting a tipping movement to the pusher when the breech-block is back to thereby elevate the forward end of the pusher, the frame having a cartridge guide to impart a downward movement to the pusher when the breech-block is in its forward position, the pusher when in its elevated position and on the forward movement of the breech-block pushing a cartridge from the magazine into the path of the breech-block.

In testimony whereof I affix my signature.

JOHN M. BROWNING.

Witnesses:
M. A. Browning,
S. N. Hobson.