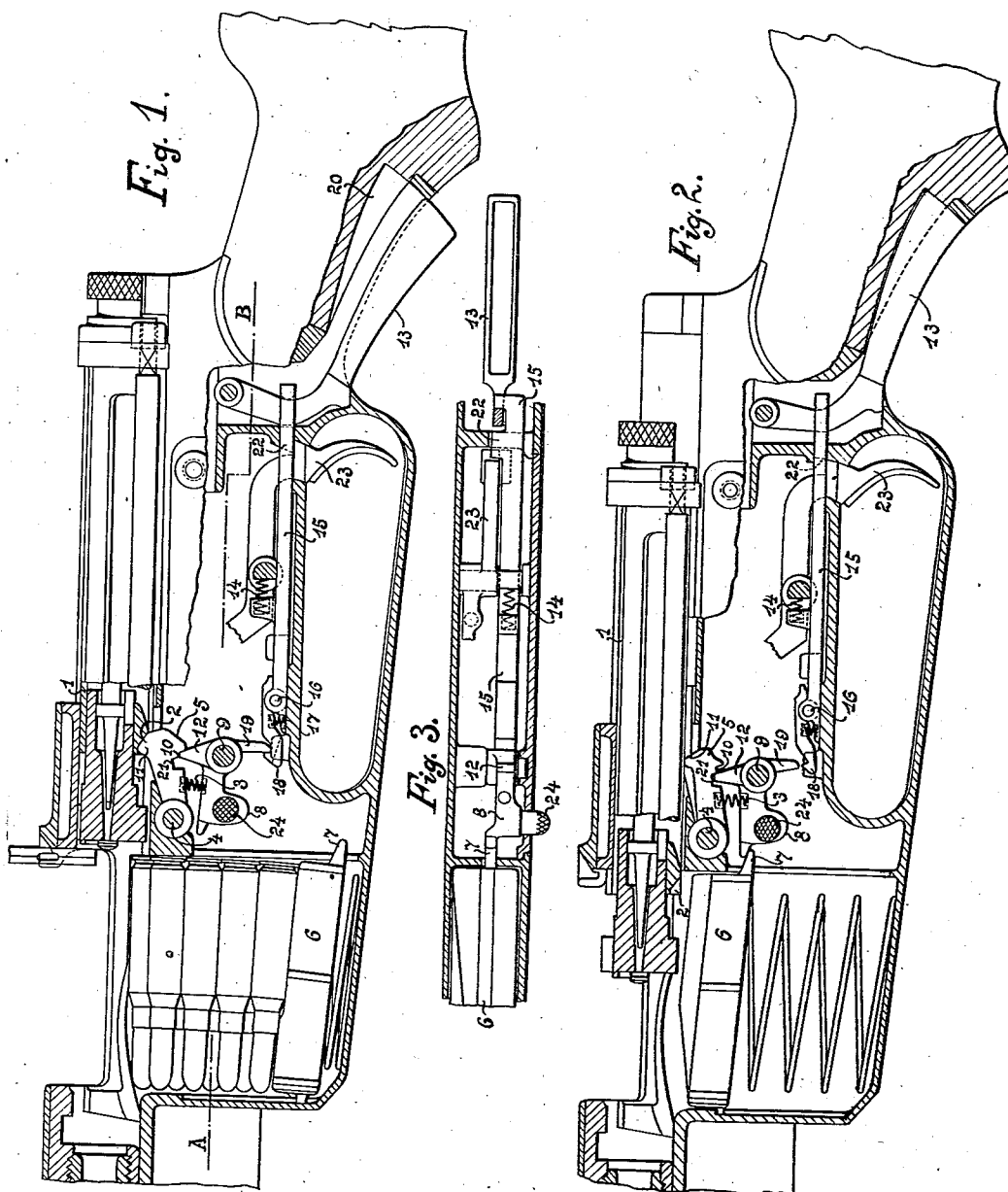


R. FROMMER.
AUTOMATIC FIREARM.
APPLICATION FILED JUNE 9, 1905.

959,002.

Patented May 24, 1910.



WITNESSES:

J. Müller
L. W. Staaden.

INVENTOR:

Rudolph Frommer
by Arthur Mueller,
Att.

UNITED STATES PATENT OFFICE.

RUDOLF FROMMER, OF BUDAPEST, AUSTRIA-HUNGARY.

AUTOMATIC FIREARM.

959,002.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed June 9, 1909. Serial No. 264,440.

To all whom it may concern:

Be it known that I, RUDOLF FROMMER, of IX. Kúlsó Soroksári út 100, Budapest, Austria-Hungary, factory manager, citizen of the Kingdom of Hungary, residing at Budapest, Austria-Hungary, have invented certain new and useful Improvements in and Relating to Automatic Firearms, of which the following is a specification.

10 In automatic firearms provision is made that upon the emptying of the magazine, that is to say after the firing of the last cartridge, the breech automatically opens so that the weapon is in condition for reloading. This result is attained because either the follower of the magazine or some part coöperating with said follower, when the last cartridge has been fired and the magazine is empty, is caused to engage with the breech-bolt in order to hold the same in its rearward position. When reloading takes place, by the downward movement of the said follower either this latter or the part coöperating with it, moves out of engagement with the breech-bolt and the closing of the breech takes place automatically under the influence of the breech-bolt spring.

Assuming that the weapon is loaded by means of a cartridge clip it is obvious that after the cartridges have been slid into the magazine and the breech-bolt has been freed from the said engagement, the breech-bolt will have a tendency to move forward but this movement will be prevented by the cartridge clip against which the breech-bolt presses, so that the cartridge clip must be removed before the breech-bolt can move forward and thus introduce a cartridge into the loading chamber. With this arrangement, however, the pressure of the spring upon the cartridge clip, especially in the case of small arms, may be so considerable that it becomes exceedingly difficult, or even quite impossible to withdraw the cartridge clip; further, a special manipulation is necessary for the removal of the cartridge clip.

The present invention has for its object to relieve the cartridge clip from this pressure and to render unnecessary a special manipulation such as has hitherto been required for the removal of the cartridge clip. With this arrangement the means which serve to hold the breech-bolt after the magazine has been emptied or the last cartridge

fired in a position ready for reloading, is not released automatically as heretofore by the loading or by the depression of the follower, but is effected independently of the depression of the latter by means of a part operated by hand. If desired, this part may be actuated by seizing the weapon at a predetermined place, and in such a case the place selected should preferably be one which must necessarily be grasped in any case when the weapon is being rendered ready for firing or is ready, as by this means any additional handling or manipulation is avoided, and this is a further object of the present invention. The desired end may be attained with various constructions in different cases. By way of example, the case may be selected in which the mechanism is arranged upon the small of the stock where the marksman must necessarily seize the weapon on firing, so that he will simultaneously actuate the device in accordance with this invention.

A constructional form of this device is illustrated by way of example in the accompanying drawings, in which:

Figure 1 represents a side view partly in section, showing the breech-bolt locked in open position. Fig. 2 is a similar view, showing the breech-bolt released, and Fig. 3 represents a section on the line A—B of Fig. 1.

The breech-bolt 1 is retained in the position for loading by means of a pawl 5 the chamfered face 11 of which engages in a corresponding chamfered recess 2 in the breech-bolt. The angle at which the recess 2 and the face 11 in engagement therewith are chamfered is such that the breech spring is able to press forward the breech-bolt and depress the pawl which latter is rotated around the pin 4 against the pressure of a spring 3. When the magazine is emptied or the last cartridge has been fired, the follower 6 ascends to such a height that the nose 7 thereon rotates a catch 8 which is rotatably mounted upon the pin 9, so that the nose 12 formed on this catch comes beneath the tooth 10 of the pawl 5. By this means depression of the pawl 5 is rendered impossible so that the breech-bolt 1 is locked in the open position ready for reloading as shown in Fig. 1. The pawl 5 is secured from depression owing to the fact that the pressure exerted by the

pawl 5 upon the nose 12 passes through the pivot 9 so that the pawl 5 and the catch 8 constitute a rigid member.

Now when the follower 6 is depressed by the loading of the magazine (Fig. 1) the locking pawl 8 is in no way affected thereby, that is to say this pawl remains in its position in which it holds the breech-bolt 1 open; if therefore there is a cartridge clip in front of the head of the breech-bolt this cartridge clip will also remain in its position in which it is not influenced by the breech-bolt 1, after the loading of the magazine, so that it may be readily removed by hand. By means of this arrangement, therefore, the cartridge clip is completely relieved from the pressure of the breech spring and consequently the arrangement of the cartridge clip which is usually employed in hand-operated fire-arms (and which is supported in front of the head of the breech-bolt at two points only) may be utilized. The pawl 8 which is brought into engagement with the pawl 5 by the follower 6 may be released by the depression of a stud 24 projecting from the pawl 8, but in order that it may be possible to completely effect the removal of the cartridge clip, upon which no pressure is now exerted, without any special manipulation, in the case represented by way of example in the accompanying drawing the lever 13 is provided upon the small of the stock and is connected with the rod 15 moving in a slide way and acted upon by the spring 14. This rod 15 is provided upon its front extremity with a hook 18 rocking around the pin 16 and acted upon by the spring 17, this hook, as shown in Fig. 1 being normally situated in front of the nose 19 of the pawl 8. If now on preparing to fire the small of the stock is seized whereby the lever 13 is pressed into the recess 20 in the stock, the hook 18 of the rod 15 will be moved back thereby engaging with the nose 19 of the pawl 8 and as the pawl 8 is rocked thereby around the pin 9 it will move out of the way of the tooth 10 into the recess 21 in the pawl 5, thus releasing the catch, whereupon the breech-bolt 1 is free to move forward under the influence of the breech spring (Fig. 2) and at the same time detaches the cartridge clip. When the lever 13 is released, the rod 15 will again be pressed forward by the spring 14 thus bringing the hook 18 into engagement with the nose 19 of the pawl 8. Owing to the chamfering of these two coöperating parts 18 and 19, the hook 18 will be depressed against the action of the spring 17 and will resume its original position in front of the nose 19; the device is therefore again in operative position.

The device described above may also be advantageously employed for automatically securing fire arms and for this purpose it is merely necessary to provide the rod 15

with a stud or projection 22. In the inoperative position of the lever 13 this stud 22 is in a position in which the trigger 23 would act upon it when firing takes place, so that firing is rendered impossible. When, however, the small of the stock is seized and the lever 13 consequently pressed into the same, the stud 22 is moved out of the path of the trigger. Firing is therefore only possible when the weapon is in condition for firing, while in all other cases it is rendered impossible. The stud 22 may be provided upon the trigger 22, a recess being then formed in the rod 15 in a corresponding position so that when the stock is seized, it comes in front of the stud on the trigger in such a manner that when firing takes place the stud is able to pass through this recess.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a magazine, a follower therein, a breech-bolt, means adapted to retain said breech-bolt in its retracted position, intermediate means arranged between said follower and said bolt-retaining means and adapted to lock said bolt-retaining means in its retaining position being itself actuated by the said follower when the magazine becomes exhausted, and means independent of the said follower for releasing the said breech-bolt.

2. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a magazine having a follower, a breech-bolt, means adapted to hold said bolt in its retracted position, said means being actuated by said follower, when the magazine becomes exhausted, a hand-operated lever on the small of the stock, and means connected with said lever for releasing the said bolt holding means independently of the said follower, upon the actuation of the said lever.

3. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a reciprocating breech bolt having a range of movement beyond said opening, means adapted to hold said bolt in its retracted position, a magazine having a follower which actuates the said bolt-holding means upon the exhaustion of the magazine, a hand-operated lever on the small of the stock, a rod controlled by said lever, and a spring-actuated hook on said rod for disengaging the said bolt-holding means upon the actuation of the said lever.

4. In automatic fire-arms the combination of a receiver provided at its top with a loading opening, a reciprocating breech-bolt having a range of movement beyond said opening, means adapted to hold said bolt in

its retracted position, a magazine having a
follower which actuates the said bolt-hold-
ing means upon the exhaustion of the maga-
zine, a hand-operated lever, a rod controlled
5 by said lever and a spring-actuated hook
on said rod for disengaging the said bolt-
holding means upon the actuation of the
said lever and a stud normally locking the

trigger of the weapon, but releasing it upon
the actuation of the said lever.

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

RUDOLF FROMMER.

Witnesses:

EDUON FÜLÖP,
LOUIS VANDORY.