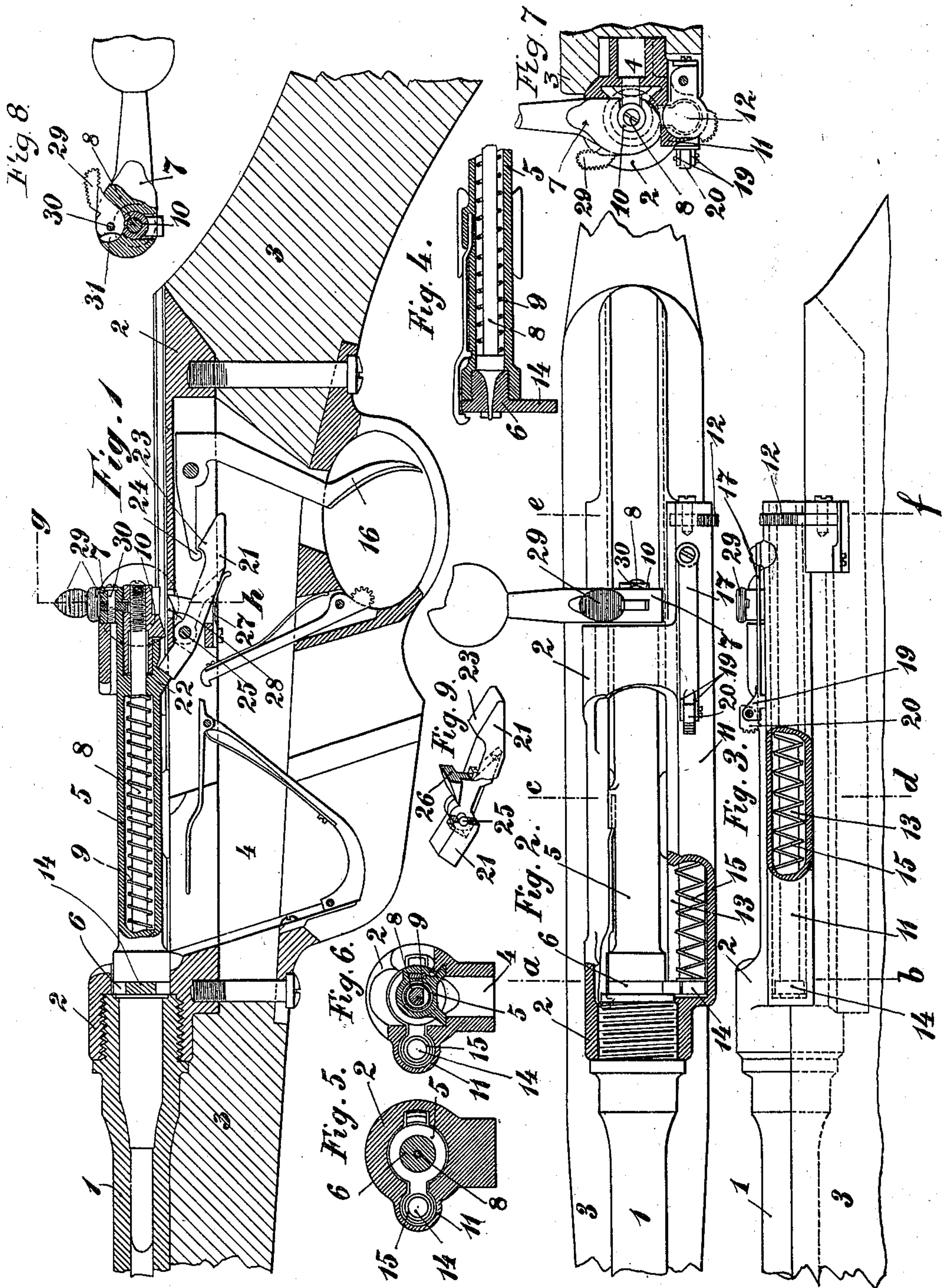


A. VON ZEKE & K. REDL.

REPEATING RIFLE.

(Application filed Jan. 19, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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REPEATING RIFLE.

SPECIFICATION forming part of Letters Patent No. 661,900, dated November 13, 1900.

Application filed January 19, 1899. Serial No. 702,743. (No model.)

To all whom it may concern:

Be it known that we, ADOLF VON ZEKE, a resident of Buda Pesth, and KAROL RÉDL, a resident of Gödöllő, Austria-Hungary, subjects of the Emperor of Austria-Hungary, have invented certain new and useful Improvements in Mannlicher Repeating Rifles, of which the following is a specification.

This invention relates to improvements in the known Mannlicher repeating rifles and is for the purpose of operating the loading automatically by means of the recoil. By this invention the breech-closer is unlocked and returned by the recoil compressing thereby a helical spring arranged in a guide constructed in one with the casing of the mechanism. The discharged cartridge is drawn out of the rifle in the known manner and ejected, while by the lowering of the butt a cartridge is brought, as formerly, into the loading-chamber after the return of the breech-closer, which by the effect of the resistance of the spring is thrown forward, so that the manipulation for firing the cartridge in the magazine is limited to pulling the trigger.

The lock of a rifle, as in this invention, is in general similar to the known Mannlicher rifle-locks. Only a few alterations are necessary, as shown in the following description.

In the description the construction and action of the Mannlicher repeating rifle are taken to be known, and therefore only those parts bearing upon this invention are described.

The annexed drawings illustrate the improvements of this invention, in which—

Figure 1 is a longitudinal section of the mechanism at the moment of firing. The magazine is shown empty. Fig. 2 is an upper view of Fig. 1. Fig. 3 is a side view, parts being represented as broken away. Fig. 4 is a horizontal section of the front part of the breech-closer. Figs. 5, 6, and 7 are respectively sections on the lines *a b c d e f* of Figs. 2 and 3. Fig. 8 is a section on the line *g h* of Fig. 1. Fig. 9 is a perspective view of the locking-bolt.

The barrel 1 is joined in the known manner with the casing 2 and this with the stock 3 and magazine 4. The casing 2 is lengthened backward and serves, as usual, for guiding

the breech-closer, consisting of the known parts—that is, the breech-closing piece 5, the head 6, and the handle 7. In the breech-closer is the firing-pin 8, the spring 9, and the firing-pin head 10. The handle and breech-closing piece are of one piece. The casing 2 is at the side (on the left) provided with a socket-like guide 11, constructed in one with the casing and closed at the front by a fixed wall and at the back by a plate 12, movable around a bolt arranged on the casing 2. This guide is provided on the side toward the casing with a longitudinal slot 13, which serves for guiding a side shoulder 14 on the head 6 of the breech-closer. This shoulder consists of a circular plate, which is joined by means of a stem fitting into the slot 13 with the head of the breech-closer. This shoulder 14 is brought from behind into the guide 11 after opening the plate 12 on moving the breech-closer into the casing 2. Then it serves as an abutment for a spring 15, the other end of which is supported by the plate 12, brought into closed position. When the breech-closer is returned by the recoil, the spring 15 expands and pushes the breech-closer back again into the closed position.

In order to retain the breech-closer at rest in the rear position during loading, a catch is arranged consisting of a spring 17, provided on the guide 11. This spring has on its free end a nose 18, which engages into a slot of the guide 11. It has, moreover, two side cheeks 19, between which an eccentric 20 is seated. When firing, the eccentric 20 has the position shown in Fig. 3, in which the nose 18 is lifted out of the course of the shoulder 14; but when loading it is turned backward, so that the nose goes into the line of the shoulder 14. The shoulder 14 lifts the nose of the spring 17 while the breech-closer is pushed back; but it immediately catches in front of the shoulder 14 and prevents the same from moving forward. The breech-closer is retained in the closed position by the bolt 21. This bolt 21, Fig. 9, is pivoted in the casing 2 and forms a two-armed lever, the forearm of which in the closed position of the breech-closer leans on an abutment 22 of the breech-closer, (see Fig. 1,) and the rear arm engages by means of its nose 23

with the finger 24 of the trigger 16. The bolt 21 has a hollow wherein a sear 26 is pivoted on the cross-pins 25. The sear 26 is pressed against the bolt 21 by the trigger-spring 27, so that when the bolt is pushed downward when pulling the trigger the sear is likewise pushed downward by the bolt 21 and is thus drawn out of the slot 28 of the casing 2 and sets free the firing-pin head 10, as represented in Fig. 1. The breech-closer is thereby entirely locked by the bolt 21 and held until the projectile has had time to quit the barrel.

As the bullet leaves the barrel the recoil overpowers the opposition of the bolt and turns the latter downward out of the line of the breech-closer, and consequently the trigger and the finger thereof are returned to their normal position. The breech-closer is unlocked and can move backward with the striking-pin 8. The sear 26 is lifted into the line of the striking-pin head 10 by the spring 27, so that the sear can catch the striking-pin head in the known manner and can compress the principal spring 9. The bolt 21 does not hinder the forward locking of the breech-closer. The pressure of the mainspring alone is not sufficient to open the breech-closer, whereas a slight drawing on the handle by hand is sufficient to open the breech-closer, as the actual locking of the breech-closer is effected at the moment of firing. The breech-closer moves a cartridge into the loading-chamber in the known manner when locking forward, so that when firing the described movements are repeated.

The bolt is with regard to the ordinary Mannlicher rifle much simplified and connected with the firing mechanism. Also the catch-piece 29 of the firing-pin has been altered, as on account of the guide 11 the same

cannot be arranged on the left, but is here located on the top of the handle-piece 7. It is movable around the pin 30 and engages in the position of Fig. 8 into a suitable notch of the firing-pin head 10. In unlocking the firing-pin the catch-piece is turned to the left, so that it comes with its hollow 31 opposite the striking-pin head 10 and does not hinder the movement of the striking-pin.

We claim as our invention in a Mannlicher repeating rifle—

1. The combination with a stock and a barrel immovable in said stock of the lock-casing a guide 11 in one piece therewith and situated at the side thereof a spring 15 in said guide, a breech-closer 6 having a shoulder 14 bearing against one end of said spring, and an abutment formed as a movable plate for the other end of said spring substantially as and for the purpose set forth.

2. The combination of a two-armed bolt 21 on the casing 2, pin 25 for said bolt, and a sear 26 pivoted on pin 25 with the breech-closer and firing-pin therein, and a spring 27 common to the bolt 21 and sear 26, the bolt 21 being adapted to hold the breech-closer after firing until the latter is set free by the recoil.

3. The combination with the guide 11 and breech-closer having a shoulder 14 of a spring 17 having a nose 18 and an eccentric 20 adapted to bear on said spring and cause the nose 18 to engage the shoulder 14 during loading.

In witness whereof we have signed this specification in the presence of two witnesses.

ADOLF V. ZEKE.
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Witnesses:

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