Dec. 29, 1925.

A. GERSTENBERGER

1,567,993

RIFLE WITH PISTOL BREECH MECHANISM

Filed Dec. 30, 1924

2 Sheets-Sheet 1

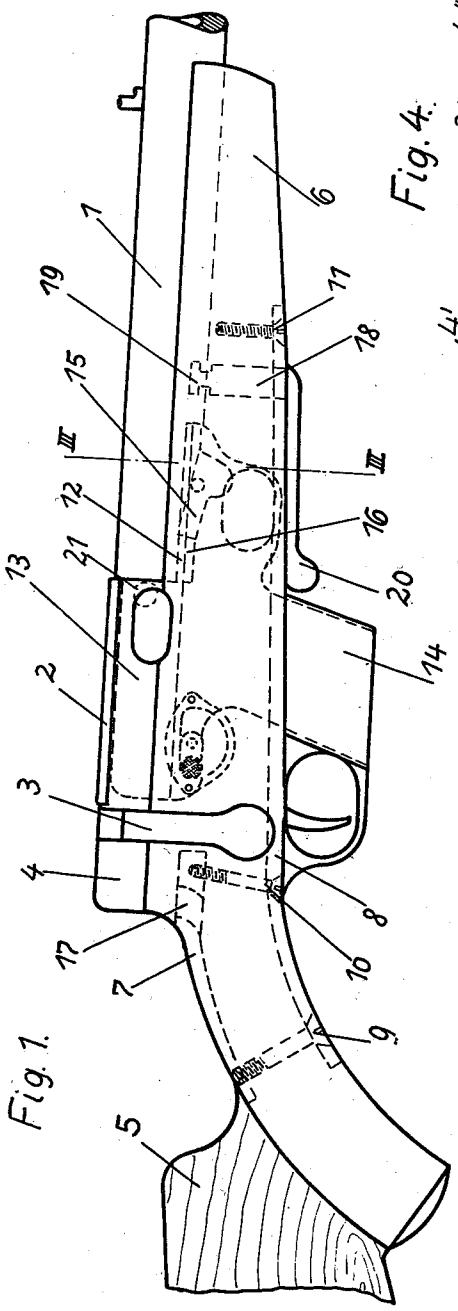

Fig. 1.

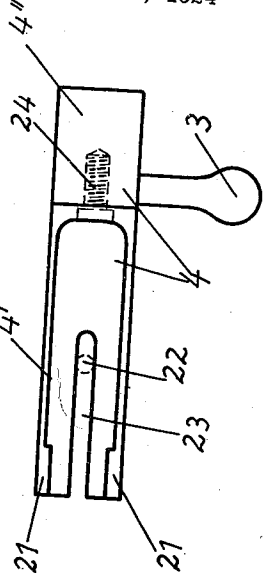

Fig. 4.

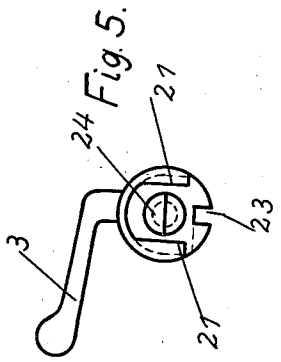

Fig. 5.

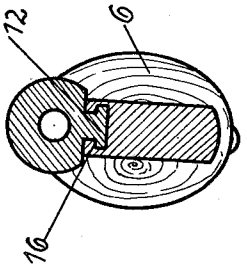

Fig. 3.

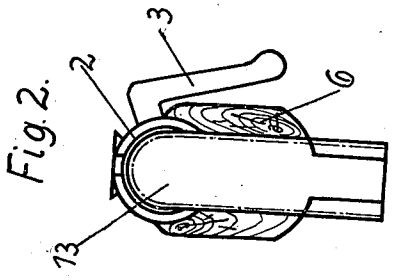

Fig. 2.

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RIFLE WITH PISTOL BREECH MECHANISM

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Fig. 6.

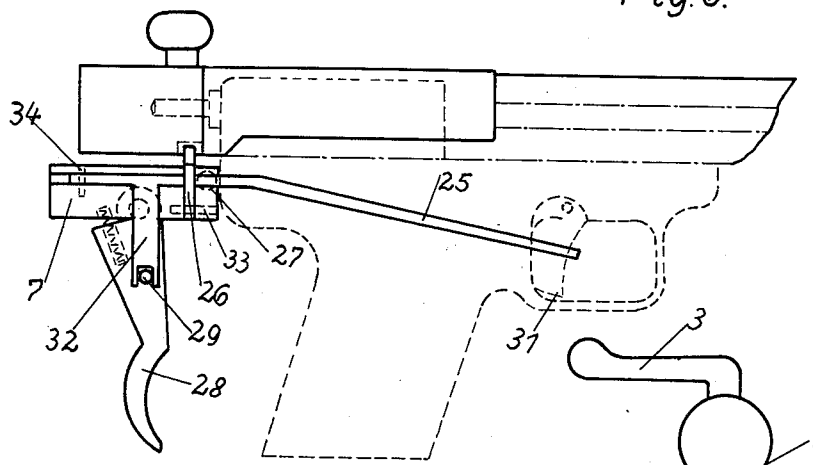


Fig. 8.

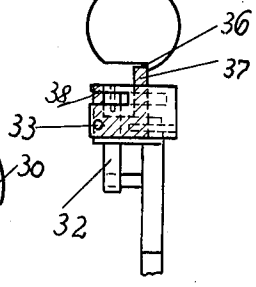


Fig. 7.

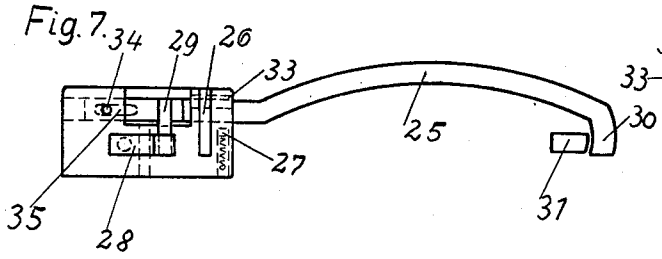


Fig. 9.

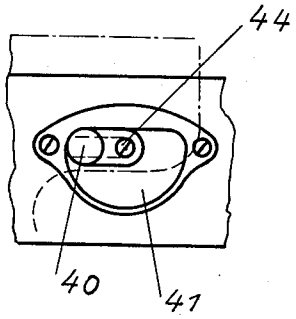
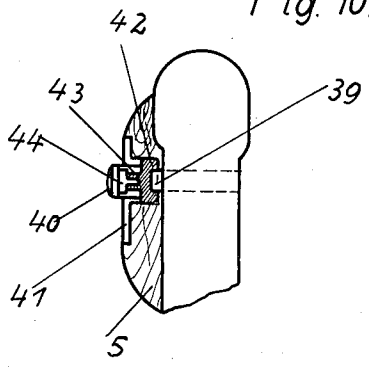


Fig. 10.



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Patented Dec. 29, 1925. 1,567,993

UNITED STATES PATENT OFFICE.

ALBIN GERSTENBERGER, OF CHEMNITZ, GERMANY.

RIFLE WITH PISTOL BREECH MECHANISM.

Application filed December 30, 1924. Serial No. 758,928.

To all whom it may concern:

Be it known that I, ALBIN GERSTENBERGER, a citizen of the German Republic, residing at Chemnitz, Germany, have invented certain new and useful Improvements in Rifles with Pistol Breech Mechanism, of which the following is a specification.

This invention relates to a rifle to which the cartridges are fed from a magazine which is similar to that of an automatically loading pistol. The rifle according to the invention presents the advantage in comparison with the magazine rifles of known type, that the breech block and the entire loading mechanism can be easily removed and that it can be made ready for use as automatic pistol after a short barrel has been mounted on the same. If the rifle is a repeater it is important that the pistol breech block be mounted in the rifle without friction but nevertheless in a stable manner and that it be brought back without friction and by mechanical transmission after the shot has been fired. These two conditions are fulfilled by the subdivided chamber. In order to prevent that the outer appearance of the rifle be unfavorably influenced by the pistol inserted in the rifle it is necessary to adapt the pistol trigger to the rifle trigger. At this occasion it is of advantage that the safety device of the pistol is transferred directly to the outer side of the rifle so that a good outer appearance of the rifle is ensured as well as an easy handling of the safety device.

An embodiment of the invention is shown, by way of example on the accompanying drawings, in which:—

Fig. 1 shows the improved rifle in side elevation.

Fig. 2 is a rear end view of the same.

Fig. 3 is a cross section on line III—III of Fig. 1.

Fig. 4 shows the chamber seen from below.

Fig. 5 is a front end view of the chamber.

Fig. 6 shows inside elevation the trigger transmission seen from the right.

Fig. 7 is a similar view seen from below.

Fig. 8 is a similar view seen from the front.

Fig. 9 shows inside elevation the transmission of the safety device, and

Fig. 10 is a cross section of Fig. 9.

With the rifle barrel 1 the guide sleeve 2 is rigidly connected (Fig. 2). In this guide sleeve 2 the breech block 4 with the handle 3 is slidably mounted. The butt 5 and the stock 6 are made in one piece. In the upper surface of the butt neck the tail 7 of the barrel is embedded and in the lower surface of the butt neck the trigger guard is fixed. Screws 9, 10 and 11 are used for this purpose. On the lower surface of the rear part of the barrel a T-bar 12 is formed (Fig. 3). The pistol breech block 13 and the pistol handle 14 are indicated in Fig. 1 by dash lines. The front part of the pistol handle 14 has a groove 16 of T-shaped cross section into which projects the spring-controlled holder 15 for the barrel. The pistol mechanism is mounted in the barrel in the following manner:—

The breech 4 open at the lower end is inserted into the guide sleeve 2 of the rifle barrel 1 from the rear, whereupon the pistol handle 14 and the breech block 13 are inserted into the breech 4 open at the lower end and pushed forward so that the T-shaped groove 16 of the pistol handle engages over the T-bar 12 of the barrel 1. The spring-controlled barrel holder 15 engages with a notch in said T-shaped bar 12. The rifle barrel is now rigidly connected with the pistol mechanism. A rearwardly inclined stud 17 of the guide sleeve 2 engages with a corresponding hole in the tail 7 of the barrel so that the pistol mechanism is also securely connected with the butt. In the stock 6 a vertical bolt 18 is located which has at its upper end a bayonet joint 19 and at the lower end a hand lever 20. When the hand lever 20 is rotated 90° the nose of the bayonet joint 19 engages with a corresponding recess of the barrel so that the bayonet joint is closed. The rifle barrel, the pistol breech mechanism and the stock are now securely connected with one another.

In order to use the breech mechanism 13 and the repeating mechanism 14 as automatic pistol the connection with the rifle is loosened and a short barrel, having a T-bar 12 on the lower surface, is inserted into the T-shaped groove of the pistol handle 14, the spring-controlled barrel holder 15 serving also in this case for locking the barrel in the handle. The breech block 13 is securely held in the chamber 4 by means of nipples 21 engaging with corresponding recesses of the breech block. The chamber 4 is positively guided in the sleeve 2 rigidly connected with the rifle barrel 1 by means of a nipple 22 downwardly projecting from

the upper inner wall of the sleeve and engaging with a longitudinal slot of the chamber 4. The chamber 4 is composed of two parts 4′ and 4″ which are pivotally connected the one with the other by a screw 24 which serves as pivot axle. On the rear short part 4″ the breech handle 3 is mounted. Owing to the subdivision of the chamber or breech 4 into two parts, the part 4″ of the same can be rotated by means of the handle 3 in order to open the breech, the front part 4′ remaining in the same position over the pistol breech block 13 independently of the rotating movement of the rear part 4″. The back movement of the breech for loading and unloading is done in the usual manner.

The transfer mechanism of the trigger is mounted in the tail 7 of the barrel. It consists essentially of the trigger rod 25, the angle lever 26, the catch bolt 27 and the trigger 28 of the rifle having a guide pin 29. The trigger rod 25 is bent and terminates as a hook 30 standing in front of the trigger 31 of the pistol. The trigger rod 25 has a fork-shaped downwardly directed arm 32 with which engages the guide pin 29 of the trigger 28. The angle lever 26 is fixed in the barrel tail 7 by means of a bolt 33. The trigger rod 25 is controlled by the pressure of the catch bolt 27 and fixed in the barrel tail 7 by means of a bolt 34 engaging with an oblong hole 35 of the trigger rod 25 so that this trigger rod can move backward when a shot is being fired.

It is of special importance that the hook-shaped end 30 of the trigger rod 25 grips the pistol trigger 31 only when the breech handle 3 has been completely pressed into its seat so that no shot can be fired when the breech block of the barrel is not entirely closed. This is ensured by the following operation:—

In the lower part of the breech 4 a notch 36 is arranged with which engages the longer arm 37 of the angle lever 26. In Fig. 8 the breech handle 3 is shown in raised position so that the breech mechanism of the rifle is not completely closed. At this state the hook 30 of the trigger rod 25 is still at some distance from the pistol trigger 31 so that when the trigger 28 of the barrel is being pulled the hook 30 would merely move along the pistol trigger. When however the breech handle 3 is completely lowered, the straight face of the notch 36 acts upon the long lever arm 37 so that the short arm 38 of the angle lever exerts a pressure upon the trigger rod 25 so that its hook-shaped end 30 is brought in contact with the pistol trigger 31. The rifle is now in proper position for firing a shot.

The pistol stop 39 acts for instance in the commonly used manner by means of a shaft and of foldable wings. The rifle stop 40 consists also of a wing 41.

The operation is as follows:—

On the inner surface of the rifle stock 5 a spoon-shaped element 42 adapted to fit over the stop wings of the pistol is arranged which is securely connected with the wing 40 of the barrel stop by means of a square head 43 and by means of a screw 44. The barrel stop and the pistol stop are situated in one straight line. By the spoon-shaped element 42 the movement of the barrel stop is directly transmitted to the pistol stop.

I claim:—

1. A rifle with pistol breech mechanism, comprising in combination a rifle barrel, a T-shaped bar on the lower surface of the rear end of said rifle barrel, a guide sleeve at the rear end of the rifle barrel, a breech case open at the lower side inserted into said sleeve, a pistol handle having a T-shaped groove in its front part and a spring-controlled barrel holder designed to securely connect the pistol handle with the barrel of the rifle.

2. A rifle with pistol breech mechanism, comprising in combination a rifle stock, a rifle barrel having a recess in its lower side, a guide sleeve at the rear end of said rifle barrel, a rearwardly projecting tail of said guide sleeve embedded in the butt neck, a rearwardly inclined downwardly projecting pin of said guide sleeve engaging with a hole of said tail piece, a vertical bolt rotatably mounted in said rifle stock, a nose at the upper end of said vertical bolt and a lever at the lower end of the same, said nose being designed to engage with said recess on the lower side of the barrel when said handle is being turned 90° in order to securely connect the rifle barrel with the pistol mechanism and with the stock and butt.

3. A rifle with pistol breech mechanism, comprising in combination with a rifle stock and rifle barrel, a guide sleeve rearwardly extending at the rear end of said barrel, a breech in said guide sleeve composed of a front part and of a rear part, two nipples on the front part of said sleeve, an automatic pistol inserted into said stock so that the breech block is accommodated in said breech of the barrel the pistol breech block having two recesses with which said nipples of the breech engage, and a handle on the rear part of the breech rotatable with regard to the front part of the breech so that the breech can be opened without altering the position of the front part of said breech.

4. In a rifle of the type claimed the mechanism for transmitting the movement of the rifle trigger to the pistol trigger, comprising in combination with the rifle trigger, a trigger rod of said rifle trigger, a hook-shaped rear end of said trigger rod having an oblong hole, a fork-shaped down-

wardly projecting arm at the rear part of said trigger rod, a guide pin on the rifle trigger engaging with said fork-shaped arm so that when the rifle trigger is being pulled the pistol trigger is pulled also by its fork-shaped front end acting upon said pistol trigger.

5. In a rifle of the type claimed, the transmitting mechanism for connecting the rifle trigger with the pistol trigger, comprising in combination the breech of the rifle having a right angular notch cut into its lower surface, a trigger rod, means for connecting said trigger rod with the rifle trigger, a bent front end of the trigger rod adapted to act upon the pistol trigger, an angle lever pivotally mounted so that its long upper arm engages with said notch of the barrel, its shorter arm being adapted to act upon the trigger rod, and a spring bolt controlling said trigger rod so that when the breech is entirely closed said angular lever is operated so as to bring the hook-shaped front end of said trigger rod into register with the pistol trigger.

6. In a rifle of the type claimed the connection of the pistol stop with the rifle stop, comprising in combination a handle of the pistol stop, a spoon-shaped element embracing said pistol stop handle, an axle of this spoon-shaped element traversing the barrel stock, a barrel stop on the outer side of the barrel stock and means for securely connecting said axle of the spoon-shaped element with said barrel stock so that when the barrel stop is being operated the pistol stop is operated also.

In testimony whereof I affix my signature.

ALBIN GERSTENBERGER.