Jan. 10, 1928. 1,655,446

R. VON FROMMER

SPORTING GUN

Filed Aug. 8. 1925

Fig. 1.

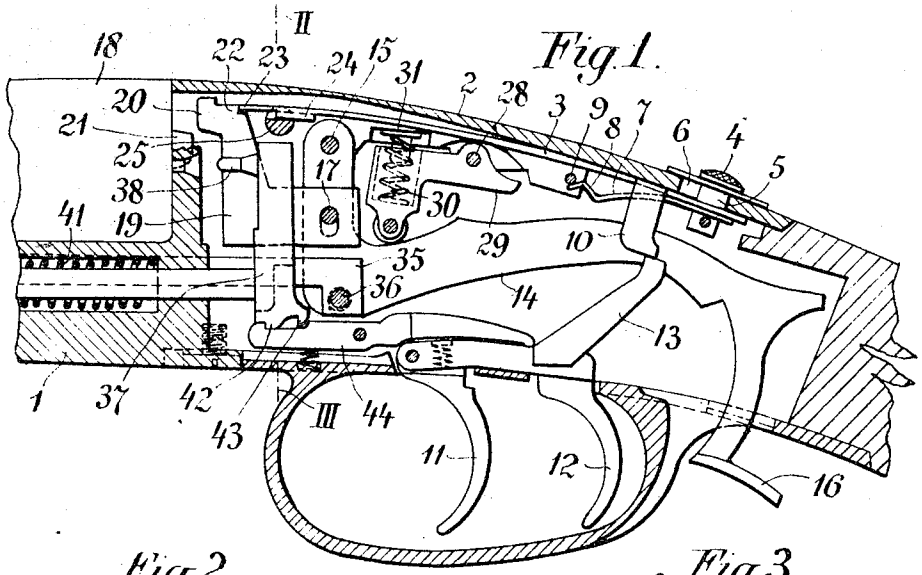


Fig. 2.

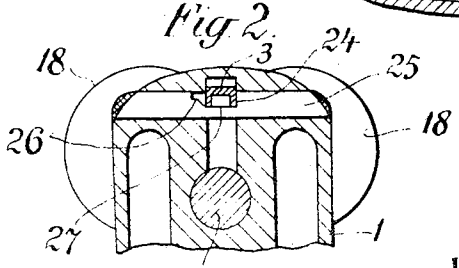


Fig. 3.

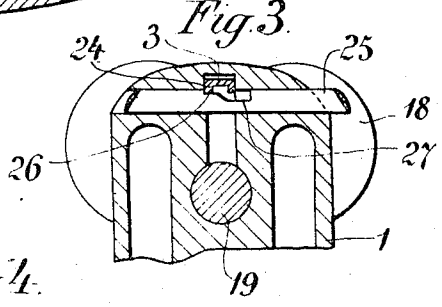


Fig. 4.

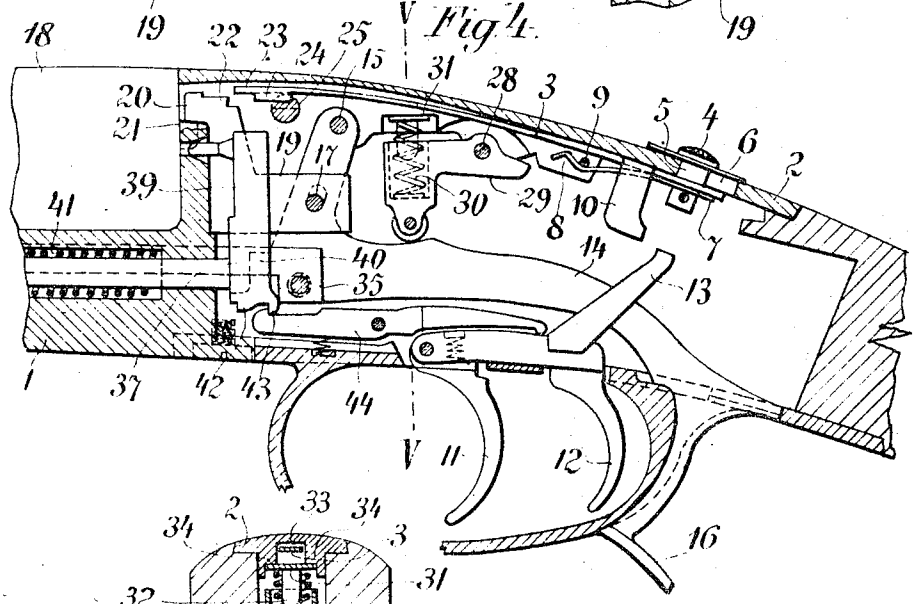
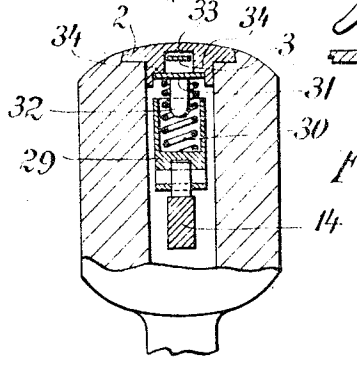


Fig. 5.



Inventor:
Rudolf v. Frommer
By Alfred Ulmer
Atty.

Patented Jan. 10, 1928. 1,655,446

UNITED STATES PATENT OFFICE.

RUDOLF von FROMMER, OF BUDAPEST, HUNGARY.

SPORTING GUN.

Application filed August 8, 1925, Serial No. 49,148, and in Hungary August 22, 1924.

My invention relates to a sporting gun having a safety device which can be used at will as an automatic safety device or a safety device to be operated by hand.

The invention therefore relates more particularly to safety devices for sporting guns having a safety bar movable in the longitudinal direction of the weapon, the said safety bar being provided with a button or the like protruding from the weapon for the purpose of enabling the operator to move the safety bar at will. According to the present invention, one of the terminals of the safety bar is made movable in some direction with respect to the other portions of the bar and can therefore be moved, before one of the parts of the gun is moved upon the cocking of the hammer or the breaking of the barrel, so that such part of the gun automatically moves the safety bar into its locking or safety position. When the movable end of the safety bar is moved into its other position, it is no longer subject to the action of said movable part of the gun and remains unaffected by the movements thereof.

In the drawing, Fig. 1, shows the firing mechanism of a sporting gun in longitudinal section, the safety mechanism being in the safety-position and adjusted to act automatically.

Figs. 2 and 3 are cross sections taken on line II—III of Fig. 1, some parts of the gun having been omitted from these views. Fig. 4 is a longitudinal section similar to Fig. 1, the safety mechanism being in its firing position and adjusted to be worked by hand. Fig. 5 is a cross section taken on line V—V of Fig. 4.

Under the extension 2 of the stock 1 of the weapon there is arranged a longitudinally movable safety bar 3. Attached thereto is a pin 5 movable in a slot 6 of the extension 2, the said pin being provided on its outside end with a button 4, by means of which the safety bar can be operated by hand. The pin 5 is provided with a spring 7 having a V-shaped end 8 adapted to cooperate with a pin 9 arranged in the stock in such a manner that spring 7 forms a resilient catch for securing the safety bar 3 in its two terminal positions, see Figs. 1 and 4. To the safety bar 3 there are also fastened in a well known manner two lugs 10, arranged in the same plane as the lugs 13 of triggers 11 and 12, so that when the button 4 is in its rearward position, see Fig. 1, the lugs 10 engage the lugs 13 of the triggers which is the safety position of the mechanism because in this position the gun cannot be fired. However, when by the pushing of the button 4 toward the left in Fig. 1, the lugs 13 are released from the lugs 10 (Fig. 4) the gun can be fired.

The breech lever 14 of the gun is pivotally mounted on pivot 15 and may be moved by hand from its normal position shown in Fig. 4 into the position shown in Fig. 1. The said breech lever is connected by means of the pin 17 to the locking bolt 19 movable within the stock 1 in the direction of barrels 18. The nose 20 of the locking bolt 19 rests in the normal position of the latter against shoulder 21 of the barrels thus securing the same in their position. According to the present invention the nose 20 of the locking bolt 19 is provided with a shoulder 22 which acts on the safety bar 3 in the manner set forth below.

The safety bar 3, according to the present invention is made resilient and tends to swing downward so that its end 23 when not affected by any of the parts of the gun takes up a position directly opposite to shoulder 22, see Fig. 1. Near the end 23 of the safety bar 3 there is provided a block 24 which is guided in notches 26, 27 of a cross slide 25 capable of being moved transversely in stock 1, see Figs. 2 and 3.

When the cross-slide 25 occupies its central position shown in Fig. 2, the block 24 on safety rod 3 lies in the deeper notch 27 of the cross-slide 25, in which position the end 23 of the safety bar 3 is directly opposite the shoulder 22 of locking bolt 19. In this position the safety mechanism will set automatically, for whenever the breech lever 14 is being pushed upwards, see Fig. 1, that is whenever the trigger mechanism of the gun is cocked the said breech lever pulls back the locking bolt 19 so that shoulder 22 of the nose 20 pushes back the safety rod 3 by means of its end 23 into its safety position. In order to make the automatic locking mechanism inoperative, all one has to do is to push the cross slide 25 into the position shown in Fig. 3 whereby the shallower notch 26 of said cross slide is brought opposite block 24 on safety bar 3. Thereby the safety bar is moved upwards to such an extent that its end 23 will be above the shoulder 22 of locking bolt 19, see Fig. 4. When

the breech lever is now pressed upwards, the shoulder 22 on nose 20 will move backwards under the end 23 of the safety bar without affecting the latter, so that the safety mechanism in this instance will not act automatically. It is obvious, that the safety bar can be operated by hand by means of its button 4, that is, it can be pushed into the safety position or can be withdrawn from such position at will. It is further understood that in order to cause the end 23 of the safety bar to engage shoulder 22 or to become disengaged therefrom it is not essential to move said end upwards or downwards, it being possible to effect such engagement or disengagement by moving said end of the safety bar in either direction at right angles to its longitudinal direction.

The breech lever 14 is moved to its normal position in well known manner by means of a pressure piece 29 pivotally mounted on pin 28 and controlled by a spring 30. To enable the safety bar 3 to move forwards and backwards and swing upwards and downwards above the spring 30 without any interference whatever, there is provided in the breech body for the bar 3 a cavity 33 (Fig. 5) and one shoulder 34 each on both sides of said cavity against which the spring 30 is bearing by means of a pin 32 carrying a disc 31.

The breech lever 14 is pivotally connected by means of pivot 36 to the locking bolt 35 securing the barrels below in a well known manner. The locking bolt 35 being provided with one shoulder 37 each either side the said shoulders abut in a well known manner against shoulders 40 of the hammers 39 so that they will carry the hammers with them as the locking bolts 35 are pulled backwards whereby the springs 41 of the hammers are compressed and the weapon is cocked. According to the present invention, the hammers 39 are provided not only with the ordinary firing notch 42 but also with a safety notch 43 with which the sears 44 of the gun may engage in the same manner as with the firing notches 42. Such safety notches were heretofore employed with hammer-weapons only, but have not been applied to hammerless weapons. When the gun is cocked, the sears 44 will snap into the firing notches 42, see Fig. 1 and the firing pins 38 will occupy their rearmost position. From this position the hammers 39 may slowly be moved by the aid of the breech lever 14 into the safety notches 43, see Fig. 4, and in this case the firing pins 38 are held withdrawn to such an extent only as to avoid touching the cartridges. It is obvious that the triggers may be equally locked, in case of the hammers resting in the safety notches by the pulling back of the safety bar 3.

For the attainment of the object of the invention it is not essential that the safety bar 3 be made resilient, but it is essential that the end 23 of the bar should be capable of a relative movement with regard to the other portions of the bar or that it should be capable of being adjusted. It is also not essential that the bar 3 should be acted upon by a shoulder provided on the locking bolt 19 as bar 3 may be acted upon by any other part of the gun which is moved, as the gun is cocked or the barrels are tilted.

I claim:

1. In a sporting gun, a manually operable safety bar movable in the longitudinal direction of the gun, one of the terminals of said safety bar being resilient so as to be movable at right angles with respect to its longitudinal movement, a member adapted to be moved upon the cocking of the gun, manual means to move the resilient terminal of said safety bar into its engaged or disengaged position with said member against the tendency of the said resilient terminal of said safety bar to move into the other position, said member when engaged moving said safety bar into its safety position upon the cocking of the gun.

2. The combination as specified in claim 1, comprising a locking bolt adapted to secure the barrels of the gun in their operative position and to be moved upon the cocking of the gun, the resilient terminal of said safety bar being adapted to engage with said locking bolt.

3. In the combination as specified in claim 1, a transverse slide adapted to be moved by hand and having means for moving the resilient terminal of said safety bar into a position to be engaged by said member.

4. In the combination as specified in claim 1, a breech lever for cocking the gun, a spring actuating said lever, and an abutment having a recess to provide a free space for said safety bar and supporting said spring.

5. In the combination as specified in claim 1, a breech lever for cocking the gun, a spring actuating said lever, and an abutment having a recess to provide a free space for said safety bar and supporting said spring, a disc supporting said spring and adapted to bear on said abutment, and a pin projecting from said disc.

In testimony whereof I have affixed my signature to this specification.

RUDOLF VON FROMMER.