Sept. 20, 1932. R. v. FROMMER 1,877,839

BARREL SPRING FOR AUTOMATIC FIREARMS

Filed Dec. 3, 1931

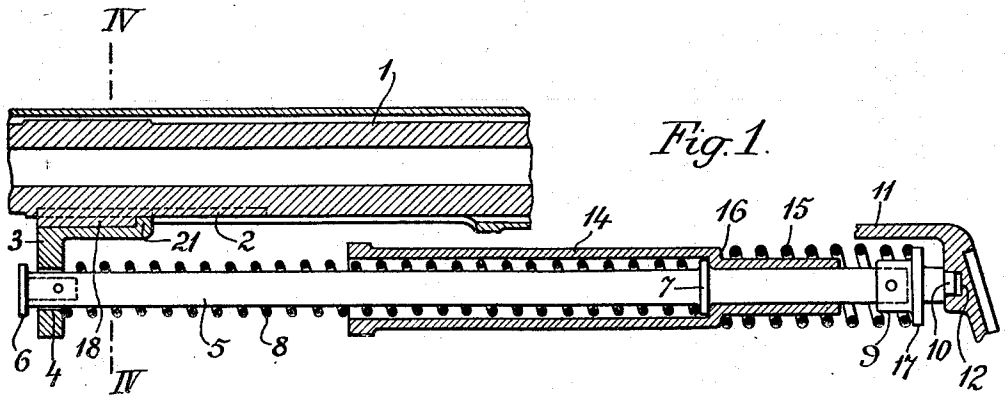


Fig. 1.

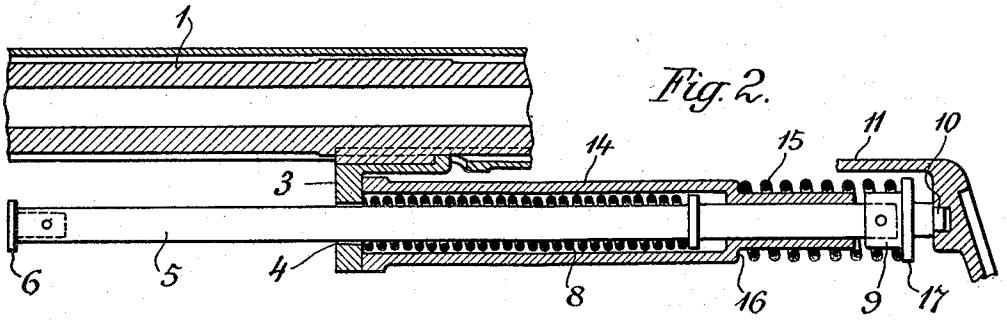


Fig. 2.

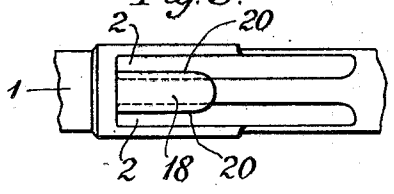


Fig. 3.

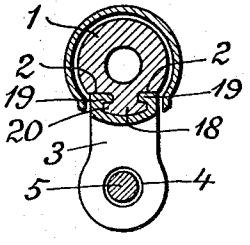


Fig. 4.

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RUDOLF v. FROMMER, OF BUDAPEST, HUNGARY

BARREL SPRING FOR AUTOMATIC FIREARMS

Application filed December 3, 1931, Serial No. 578,764, and in Hungary December 4, 1930.

The present invention relates to improvements in the construction of barrel springs for automatic fire arms, and more particularly for fire arms having a straight pull breech and a barrel with a long recoil movement. In the known fire arms of this kind the barrel spring is guided along its whole length on a guiding rod, and the barrel or a projection secured to it strikes at the end of the recoil movement against a buffer sleeve shiftable on the guiding rod of the barrel spring. The shifting movement of this sleeve receiving the shock of the barrel is controlled by a buffer spring which is stronger than the barrel spring.

According to the present invention the said buffer sleeve is adapted to surround the barrel spring and at the same time the guiding rod of the barrel spring is provided with a flange on which the said buffer spring bears.

In the accompanying drawing one form of the invention is shown by way of example.

Fig. 1 is a partial longitudinal section of the improved fire arm showing the springs in their state of rest.

Fig. 2 is the same section but in the fully compressed position of the barrel spring and in a partly compressed position of the stronger buffer spring, in which the projection secured to the barrel bears against the buffer sleeve.

Fig. 3 is a view looking from below of a part of the barrel, to which the projection may be secured.

Fig. 4 is a section taken on line IV—IV of Fig. 1.

The barrel 1 of the fire arm is provided with grooves 2 in which the projection 3 may be shifted from the right to the left in order to attain the working position shown in Fig. 1. Under the grooves 2 is arranged a rib 18 having a T-shaped cross-section and being shorter than the grooves 2, Fig. 3; thus at the right end of the grooves 2 the projection 3 can be put to the barrel and then pushed to the left, thereby it surrounds the rib 18. In this position the inwardly directed edges 19 of the projection 3 are situated above the flanges 20 of the rib 18, securing the projection in this way to the barrel. The extreme position of the projection 3 at the left is defined by the left ends of the grooves 2, and by the right end of the rib 18 at which the nose 21 of the projection bears.

The projection 3 can easily be shifted along the guiding rod 5 by means of its bore 4. The guiding rod has a flanged head portion 6 which is removably secured to the end of the guiding rod. Around the guiding rod 5 is situated the barrel spring 8 which presses foreward the barrel; the rear end of this spring 8 bears on a collar 7 of the guiding rod, the front end resting on the projection 3.

At the rear end of the guiding rod 5 is secured an end portion 9, the pin 10 of which penetrates by the action of the barrel spring 8 into the bore 12 of a fixed part of the fire arm, for instance the frame 11.

Around the guiding rod 5 is arranged the buffer sleeve 14, the rear part of which having a less diameter than the front part and being surrounded by the buffer spring 15, which controls the movement of this sleeve. According to the invention the barrel spring 8 is along a great part of its length surrounded by the buffer sleeve 14, thereby a good guidance of this spring is attained, a protecting cover being at the same time afforded for the same. The front end of the buffer spring 15 bears against a shoulder 16 of the sleeve 14, the rear end resting on a flange 17 of the end portion 9. By the provision of this flange 17 and by the arrangement of the spring 8 partly inside the sleeve 14, a light construction is attained which can easily be taken to pieces.

The device according to the invention may be applied to the known kind of automatic fire arms in which after firing of a cartridge the barrel and the breech recoil together on a long way and in a closed position. At the end of the recoil movement the breech is retained by known means and the barrel moves foreward without the breech, thereby the breech is opened and the cartridge extractor pulls the empty cartridge shell out of the chamber, this shell being afterwards thrown out by the ejector. When the barrel

reaches its original position, it disengages the retaining elements of the breech, whereupon the closing spring pushes forward the breech which is again bolted with the barrel.

I claim:

In an automatic fire arm, a barrel having a long recoil movement, a barrel spring adapted to press forward the barrel, a guiding rod for said barrel spring the latter surrounding the guiding rod, a flange situated at the rear end of said guiding rod, a buffer sleeve shiftable on said guiding rod and adapted to receive the shock of the barrel and to surround said barrel spring, a buffer spring controlling the movement of said buffer sleeve and bearing on said flange.

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