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AUTOMATIC FIREARMS
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Fig. 1

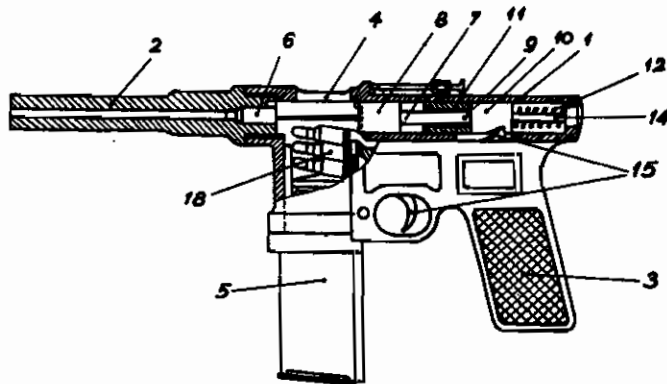
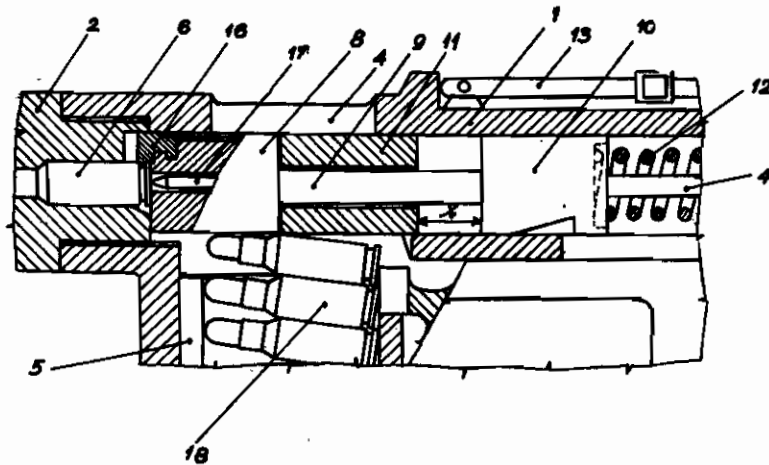


Fig. 2



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AUTOMATIC FIREARMS

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The present invention relates to automatic firearms and more particularly to automatic hand firearms, especially pistols.

It is an object of this invention to provide for such automatic firearms, which have a diminished rapidity of fire.

Other objects will appear as the specification proceeds.

With automatic hand firearms and more particularly with pistols it is of importance that the rapidity of fire (cadence) is as small as possible, since with a high speed of fire the user has not sufficient time of accurately aiming afresh, so that the fire becomes very inaccurate. With automatic arms, for instance with machine guns, the rapidity of fire can be diminished by special devices which are mounted in the trigger mechanism. Such known devices are however very complicated and subject to disturbances with respect to the springs employed. In addition thereto it was not possible to use such devices in connection with small hand firearms such as pistols or the like.

The present invention purports to provide a device for diminishing the rapidity of fire, which can be used also with small arms of this kind and which is very simple so that the present constructions retain the properties required and more particularly the ease of operation.

According to the invention a considerable diminution of the rapidity of fire is attained by increasing the mass of the breech block by an additional mass, which is freely added to the breech block and is driven by same in either motion of direction, this additional mass acting by its force of inertia upon the driving momenta exerted on the breech block, no matter whether these driving momenta result from the action of the driving gases or from the tension of the recuperator spring. The additional mass forms a body which is so arranged with respect to the breech block or piece that this body after the end of the rearward and forward movement, respectively, of the breech block, by which it is driven, performs its relative motion to the breech block and strikes during this motion against the breech block, thus effecting a delay of the rearward and forward movement, respectively. The arrangement of the additional mass is preferably performed in such manner that the mass is accommodated between guide parts of the breech block which are connected with each other by a peg. The additional mass may for instance form a displaceable ring sliding on such a peg so that said guide parts form stops, which are distanced

from each other by an amount greater than the breadth of the ring-shaped body, which thus performs a greater rearward and forward movement than does the breech block. By the arrangement of the additional mass on the moving breech block one obtains the qualities required, without a special delaying device being needed in the trigger mechanism or in the casing of the weapon. The arrangement according to the invention is simple, it does not require any springs and it is not subject to any disturbances so that the firearm secures accuracy of fire.

In the drawings affixed to this specification and forming part thereof an embodiment of this invention, applied to a pistol, is illustrated diagrammatically by way of example.

In the drawings

Fig. 1 is a sectional view of a pistol provided with a device according to the invention and with the breech device in opened position.

Fig. 2 is a partial sectional view, on a larger scale, of the pistol with the breech device in closed position.

Referring to the drawings, 1 is the casing of the breech, 2 the barrel and 3 the butt end of the pistol. In the wall of the casing 1 is arranged in known way an opening 4 for the ejection of the empty cartridge cases and a bearing for the magazine 5 of the cartridges 18. The cartridge chamber 6 of the barrel 2 can be closed by means of the breech block 7 which is provided with the striker 17 and the cartridge ejector 16. In the modification shown in the drawings the breech block consists of two cylindrical heads 8 and 10 which are connected by a peg 9. Between the two heads 8 and 10, which simultaneously serve as guide parts of the breech block, a ring 11 is arranged, by means of a bore, sliding on the peg 9. The breadth of this ring 11 is smaller than the distance between the heads 8 and 10, so that the ring which forms the additional mass provided in accordance with the invention, is capable of performing a relative motion with regard to the heads 10 and 8, respectively, to the amount x .

In the casing 1 is further accommodated the recuperator spring 12 of the breech device, which is arranged concentrically with the recuperator rod 14, and a trigger device 15 of any known construction.

When a shot is fired, the breech block is situated in the position shown in Fig. 2. By the return pressure of the gases of the powder charge in the cartridge the breech starts its rearward movement, guided by the heads 8 and 10 in the

casing 1 of the firearm, and compresses the recuperator spring 12. The ring 11 is placed during this motion close to the head 8 and is driven by same. After the end of the rearward movement during which the empty cartridge case is ejected through the opening 4, the breech block stops in the rearward return point, while ring 11 in consequence of the force of inertia performs a relative motion towards the head 10 by the amount x and strikes against head 10, as shown in Fig. 1. This blow acting against the action of the spring 12 causes a delay of the forward movement caused by the tension of spring 12. After the blow has been damped, the breech block starts the forward movement and simultaneously drives the ring 11 supported against the head 10. During the forward movement a fresh cartridge is pushed from the magazine 5 into the cartridge chamber 6, and another shot is fired in known manner, after chamber 6 has been closed. As soon as the breech block arrives at the forward return point, the ring 11 moves in consequence

of the inertia towards the head 8 and acts now by another blow against the direction of opening of the breech block so that the opening is delayed.

By the action of the ring 11 on the heads 8 and 10, as described, one obtains a considerable decrease of the rapidity of fire (cadence).

In the example described above and illustrated in the drawing the breech block is shaped as a body of rotation and the additional mass as a ring-shaped body. The form of the body 11 and its arrangement on the breech block is however not decisive for the essence of the present invention, so that within the scope of the present invention the form imparted to the additional mass and its arrangement may be changed in various respects.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

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