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AUTOMATIC SHOULDER FIRE-ARM ADAPTED  
TO BE USED IN CARRIAGE  
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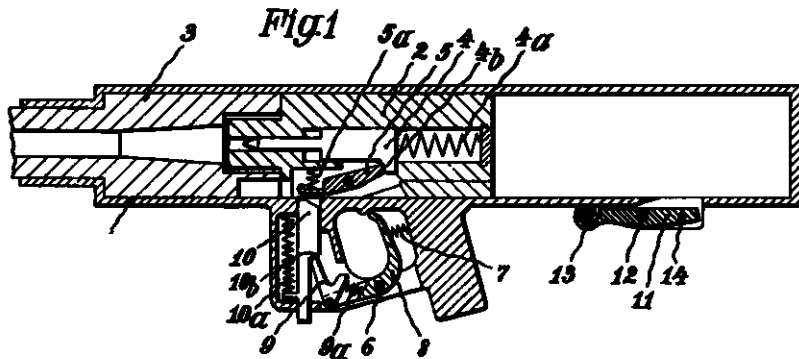


Fig. 2

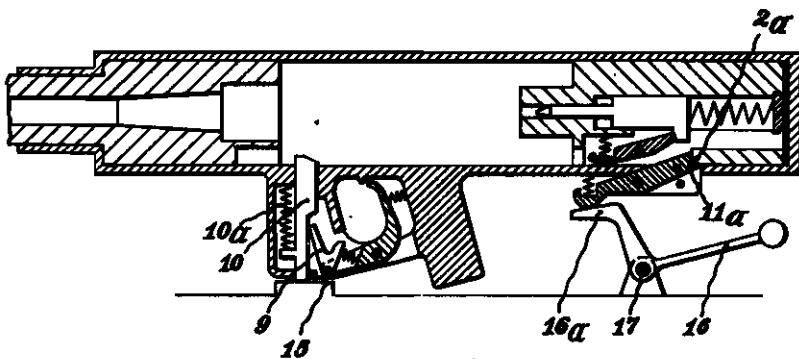
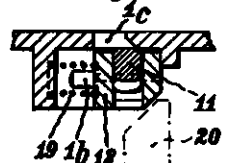
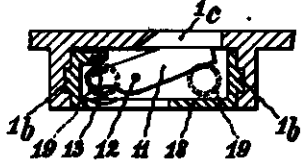


Fig. 3

Fig. 3a



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# ALIEN PROPERTY CUSTODIAN

## AUTOMATIC SHOULDER FIRE-ARM ADAPTED TO BE USED IN A CARRIAGE

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In automatic fire-arms with trigger device acting upon the striker of the closed breech, the inconvenience exists, that when the fire is interrupted a cartridge is still inserted into the barrel by the forward moving breech and unintentionally might be fired in the barrel which has become hot by the shooting. For this reason it has already been proposed to provide on such so-called open firing arms a catching device adapted to catch and stop the breech block in the rear extreme position. This breech catch is held during the firing in disengaged position and, when it is intended to stop the firing, liberated so that it can engage and lock the breech returning into its open position.

Trigger devices acting upon the striker have the advantage to ensure for the single shooting that the firearm is steadily held in the aiming position. In the continuously firing arms, however, the breech rapidly moves forward as striking device from the rear cocked position. As soon as the breech arrives in the locking position the shot is fired and by the forward movement of the masses of the breech in conjunction with the shock occurring when they are stopped the aimed single shot is disturbed.

The advantages and inconveniences connected with the open and closed firing arms have already led to the proposition of arranging trigger devices which make the fire-arm operate open-shooting at single fire, closed-shooting at continuous fire. With this object in view a transformation arrangement has been provided which admits of adjusting the trigger mechanism of the fire-arm to single or continuous shooting and to make the same act as striking device in the first instance upon the striker and in the second instance upon the breech. It has also already been proposed to arrange on the fire-arm two independent triggers of which one acts upon a catch for the cocked striker and the other upon a catch for the cocked breech.

The invention relates to the different possible firing manners of such fire-arms in relation to their object of use and employment, now as independent shoulder arm and then in carriage. According to the invention control elements are provided on the fire-arm and on the carriage of the same, the co-operation of these control elements adjusting the fire-arm mounted in the carriage for a certain kind of shooting, i. e. the open-shooting or the closed-shooting. An automatic charger for independent use (shoulder-shot) constructed as open-shooter can thus be transformed by mounting in a carriage to a

closed-shooter. At the same time an adjusting of the arm from single-shooting to continuous shooting can be effected. In this manner it is possible for instance to employ the well known large-calibre tank gun, which from the shoulder and placed in a fork-shaped support fires single shots, as machine-gun in a carriage for flying machines defence.

By the invention the actually suitable manner of shooting is thus automatically imparted to those fire-arms, which are capable for carrying out different kinds of shooting corresponding to their employment as shoulder arm or mounted in a carriage. Errors in the adjusting are excluded and the soldier himself need not trouble about carrying out the adjustment. The holding- and trigger arrangements for the striker and breech of the fire-arm may be made and constructed as desired. Of the known types of fire-arms those with two triggers independent the one from the other and also such which have only one single trigger with transforming mechanism are suitable herefore.

A fire-arm according to the invention is illustrated by way of example in the accompanying drawing, in which

Fig. 1 shows in longitudinal section a fire-arm in the operative position of the trigger arrangement destined for use as shoulder arm, the breech being closed,

Fig. 2 is a similar view as Fig. 1 showing the fire-arm used as mounted on a carriage, the breech being in the open position,

Figs. 3 and 3a show, the one in longitudinal section and the other in cross-section, a suitable special construction of a part-arrangement.

In the case of the fire-arm the breech 2 is guided at the shooting in known manner so that, unbolted from the barrel 3, it can recoil in opposition to a closing spring. During the recoil movement the striker 4, mounted in the breech 2 so that it can move in longitudinal direction and controlled by a firing spring 4a, is cocked. A trigger pawl 5 loaded by a spring 5a and oscillatably mounted in the breech 2 engages in front of a nose 4b of the cocked striker 4, said trigger pawl 5 adapted to be disengaged by a trigger device for firing a single shot.

In the present case the trigger device consists of a trigger tongue 8 oscillatably about a pin 6 in the trigger guard in opposition to a return spring 7, a catch pawl 9 consisting of an elbow lever being pivotably mounted on said trigger tongue and one arm of this elbow lever being pressed by a spring 9a against a trigger rod 10

controlled by a spring 10a. One arm of the catch pawl 8 cooperates with a pressure surface 10b of the trigger rod 10 and pushes this trigger rod upwards into the firing position when the trigger tongue 9 is pulled back. The trigger pawl 5 is thus brought out of the position in which it catches the cocked striker 4. When this position has been reached, the second arm of the elbow lever 9 abuts against a face 1a of the trigger guard. When the trigger movement continues, the arm of the elbow lever acting upon the trigger rod 10 can slip off the shoulder 10b of the trigger rod and this rod can return into the initial position under the pressure of its spring 10a. To again fire a shot the tongue 9 of the trigger must be released to return into the position of rest and then be pulled back. The trigger device operates therefore as single shot trigger and for the operation of the fire-arm as open-shooting system.

Besides the single-shooting trigger arrangement a breech catch 11 is provided in the rear portion of the case 1 of the fire-arm, said breech catch consisting of a catch pawl for the breech 2 oscillatable about a bolt 11 of the case 1 and controlled by a spring 13. When the fire-arm is to be used as shoulder arm for firing single shots with the manner of operation of the open shooting system, the catch pawl 11 for the breech is disengaged and, as shown for instance in Figs. 1 and 2, secured in the inoperative position by an insertable pin 14 or by any other locking device adapted to be inserted by hand or automatically by a spring. A suitable construction of the last mentioned kind is shown in Figs. 3 and 3a. The breech catch 11 is shiftably mounted in a casing 18 in transverse guides 1b on the bottom of the fire-arm. The shiftable casing 18 is secured by springs 19 in a position in which the breech catch 11 is laterally displaced relative to the aperture 1c in the bottom of the fire-arm.

If then the fire arm is placed into a carriage as diagrammatically indicated in Fig. 2, a projection 15 on the carriage or a similar element acts for disengaging the single-firing trigger upon the trigger rod 10 and maintains the same in the position in which the locking pawl 5 for the striker is disengaged so that, when the breech 2 moves into its extreme front position, a shot is fired. The interrupting effect of the single-firing trigger device therefore cannot occur. The controlling of the firing is then effected by the breech catch 11, the catch face 11a of which is oscillated by the spring 13 into the path of a catch notch 2a of the breech 2 by pulling out the pin 14 or, in the construction according to Figs. 3 and 3a, automatically and positively by

a stop 20 of the carriage, this stop 20 shifting the casing 18 in lateral direction when the fire-arm is placed on the carriage, so that the breech catch 11 catches the breech 2 in the open position as striking device of the arm. The control of the breech catch 11 for shooting can be effected by a trigger lever 16 mounted in the carriage, this lever being oscillatably mounted on a bolt 17 of the carriage and disengages at 18a, against the action of a spring 13, from the breech catch position when the end of its handle is depressed. As long as the trigger lever 16 of the carriage is not in engagement the arm fires continuously as repetition system, but when the trigger lever is released the breech is held in the rear extreme position by the breech catch 11.

In order that in special cases single shots can also be fired with the fire-arm mounted in a carriage, the projection 15 of the carriage can be made adjustable, so that it can be pushed out of the normal position in which it acts upon the trigger rod 10. The fire-arm can then be used by means of the single trigger as open-shooter in the single shot. The adjusting of the projection 15 of the carriage is thus preferably subjected to the action of a carriage trigger, by which the carriage part 15 can then be made to act intermittently at each shot upon the trigger rod 10.

When the fire-arm is to be used selectively as automatic loader in the firing from the shoulder or as automatic fire-arm mounted in a carriage, a change of the firing favorable for each of the two kinds of use, in the first instance as open-shooter and in the second instance as closed shooter, takes place. Thereby, automatic fire-arms, which as shoulder arms are fired in the closed system, are transformed to machine guns by mounting them in the carriage so that they can continuously fire in the open system. Herefrom results for the different technical employment a much desired simplification of the fire-arm system. A large-calibre shoulder-arm for tank defence operating as a single-firing arm with open shooting system can serve, merely by addition of a breech catch, as machine gun mounted in a carriage according to the closed-shooting system. In modification of the above described embodiment, in which this cam-catch is provided on the fire-arm itself, it is sometimes more practical to mount the breech catch on the carriage. The catch then engages, for the co-operation with the breech, into an opening in the fire-arm mounted on the carriage, this opening being normally closed.

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