June 20, 1950 H. EGLIN 2,512,014

AUTOMATIC INERTIA-LOCKED FIREARM WITH AUTOMATIC HAMMER

Filed July 29, 1947 2 Sheets-Sheet 1

Fig. 1

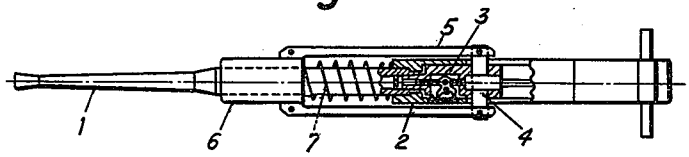


Fig. 2

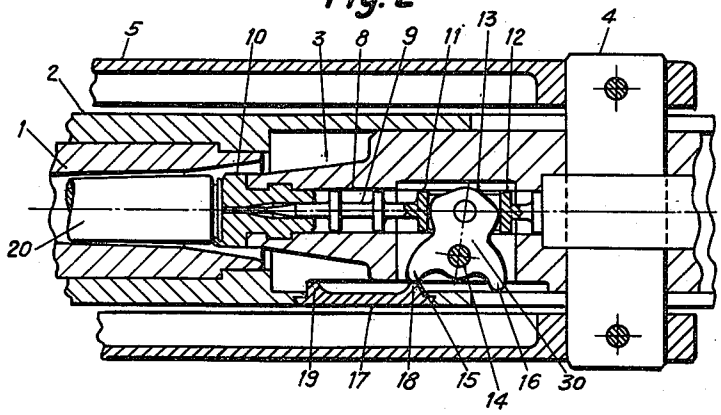
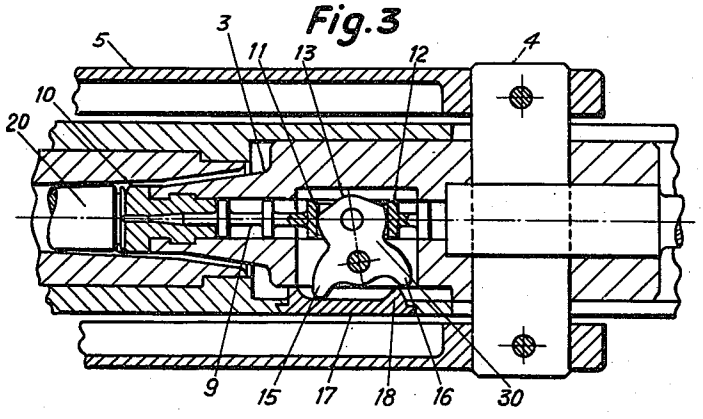


Fig. 3



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Fig. 4

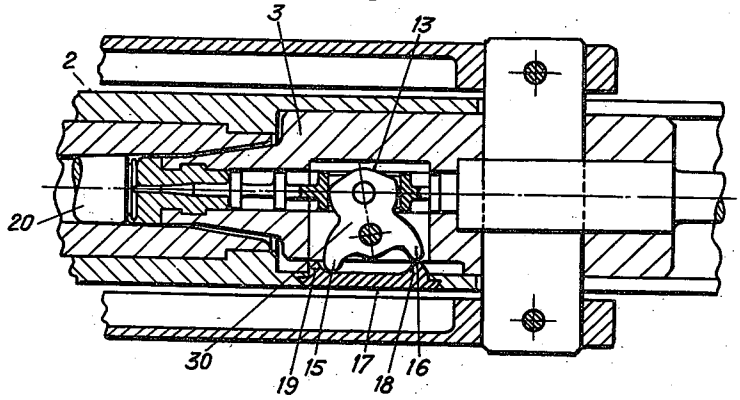


Fig. 5

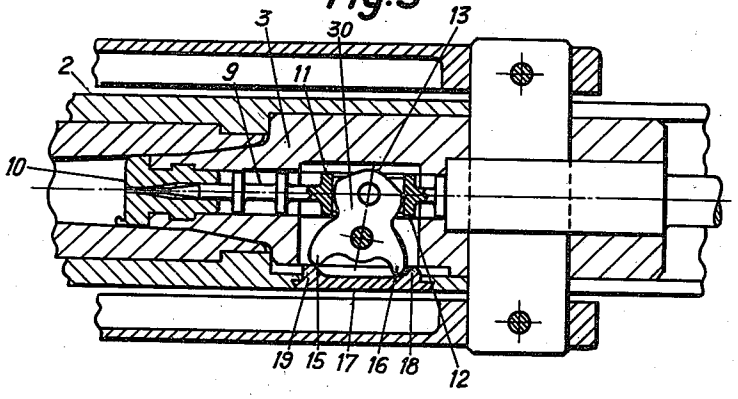
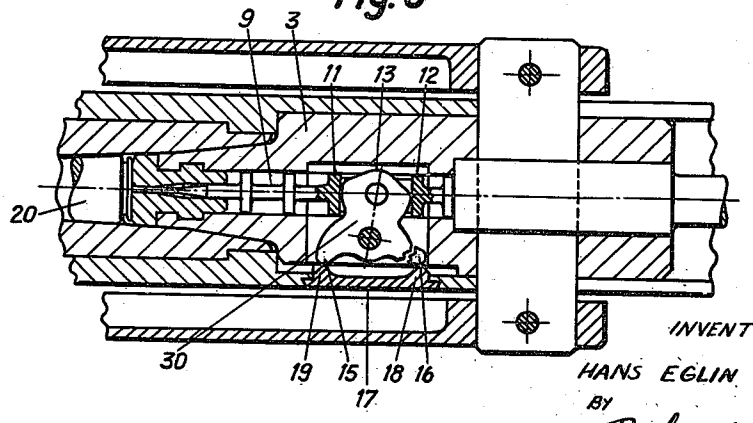


Fig. 6



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UNITED STATES PATENT OFFICE

2,512,014

AUTOMATIC INERTIA-LOCKED FIREARM WITH AUTOMATIC HAMMER

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In Switzerland November 13, 1942

Section 1, Public Law 690, August 8, 1946
Patent expires November 13, 1962

2 Claims. (Cl. 89—151)

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In automatic inertia-locked firearms the movement of the striker pin is brought about by a lever which, on reaching the firing position, butts against a cam or projection arranged in the path of the breech block and, in consequence, the striker pin impels forward. The rearward movement of the striker pin is also brought about by the same lever which, in the course of the rearward movement of the breech block, again butts on the said cam or projection, thus causing the striker pin to move rearwards.

It has now been found that the said lever which is controlled by the cam or projection arranged in the path of the breech block and brings about the movement of the striker pin, is liable to break if the weapon remains in use for some prolonged time. The destruction of this lever moreover may take place through other circumstances, for instance, defects of material.

One consequence of the rupture of the said lever is that the cartridge introduced by the breech block is not fired. As a result, the breech block strikes hard against the cartridge chamber and experience has shown that under certain conditions the striker pin may be impelled forward to such an extent through this hard blow that a delayed ignition of the cartridge takes place. Such a so-called "delayed ignition"—in which the cartridge is not ignited on the forward stroke of the breech block but only after the breech block has struck hard against the cartridge chamber—however, is to be avoided. One aim of this invention is, therefore, to stop further firing in the event of the rupture of the said lever controlling the striker pin.

A further aim of the present invention is to provide a device in inertia-locked automatic firearms, by means of which it is made possible to prevent a belated ignition of the cartridge in the event of the rupture of the lever controlling the movement of the striker pin.

Accordingly, in an automatic inertia-locked firearm in which the striker pin is actuated by a lever controlled by a cam or projection provided in the path of the breech block, the present invention provides an additional cam or projection carrying back the lever, and consequently the striker pin, as soon as the breech block runs beyond the normal front reversal position. The result thus obtained is that in case the said lever controlling the movement of the striker pin should break and the breech block strike hard against the cartridge chamber, the striker pin will not be hurled forward under the effect of inertia, and therefore will not ignite the cartridge, but on the contrary will remain in its rear position, i. e., will reach the firing position.

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The accompanying drawings show one constructional embodiment of the present invention. On the drawings:

Fig. 1 is a diagrammatic representation of an inertia-locked automatic firearm.

Fig. 2 is a section through the firearm showing the disposition of the striker pin and of the members controlling it in the positions they occupy during the forward travel of the breech block;

Fig. 3 is a section through the firearm showing the dispositon of the striker pin and of the members controlling it in the firing position;

Fig. 4 is a section through the firearm showing the disposition of the striker pin and of the members controlling it in the positions they occupy in the normal front reversal position;

Fig. 5 is a section through the firearm showing the disposition of the striker pin and of the members controlling it where there is no cartridge in the chamber; and

Fig. 6 is a section through the firearm showing the disposition of the striker pin and of the members controlling it in the positions they occupy after the rupture of the said lever controlling the striker pin.

Referring to the drawings:

The barrel 1 is inserted in the usual manner into the breech casing 2 in which the breech block 3 reciprocates. The breech block is connected by means of a cross-key 4 through the breech bar 5, with the tube 6 guiding the recuperator spring 7 which is fitted round the tube. The striker pin 9 is fitted in the breech block 3 in a central bore 8 and its striker point is guided in a member 10 fitted in the breech block 3. The striker pin comprises two shoulders 11 and 12 arranged on opposite sides of a lever 13 pivotally arranged on a pin 14. The lever 13 is provided with two spaced finger-shaped projections 15 and 16. In the breech casing 2 is inserted a plate 17 provided with two cam-like projections 18 and 19. The cartridge is designated by the reference numeral 20.

The working of the above described arrangement briefly is as follows:

On its forward travel the breech block 3 pushes a cartridge 20 into the cartridge chamber. As soon as the breech block has reached a definite firing position the projection 16 on the lever 13 contacts the cam 18 provided in the path of the breech block. The lever 13 is thus forced to pivot round the pin 14 and thus causes the striker pin

9 to strike the cartridge 20 and to fire it (Fig. 3).

Fig. 4 shows the front reversal of the breech block when the cartridge 20 is fired. The projection 15 does not reach as far as the cam 19. If now the breech block again travels rearwards, the projection 15 is forced upwards by the cam 18, thus causing the lever 13 again to pivot around the pin 14 and carry back the striker pin 9 (Fig. 2).

Referring to Fig. 5, if there is no cartridge in the barrel the breech block runs beyond its normal front reversal position. In this case, however, the projection 15 comes within the range of action of the cam 19 and the striker pin 9 is carried rearwards.

The action is similar in the case of a rupture of the projection 16 of the lever 13. Firing cannot take place in this case and there would arise the danger mentioned above, namely that with the hard impart of the breech block on the cartridge chamber the striker pin 9 could be hurled forward and subsequently ignite the cartridge. However, in this case the lever 13 is caused to revolve around the pin 14 by the projection 15 running on the cam 19 and the striker pin is carried backwards.

I claim:

1. In an automatic inertia-locked firearm, in combination with a breech casing, a breech block reciprocable in said breech casing, and a striker pin located in said breech block and having two shoulders, a cam-lever pivotally mounted in said breech block and adapted to engage consecutively said two shoulders to move said striker pin forwardly and rearwardly, a forward projection and a rear projection upon said cam-lever, a plate upon said breech casing, a forward projection on said plate for engagement with the forward projection of said cam-lever in the event of the breakage of the cam-lever, and a rear projection on said plate which is engaged by the rear projection of said cam-lever during the reciprocation of said breech block to turn said cam-lever and thereby operate said striker pin.

2. An automatic inertia-locked firearm in accordance with claim 1, wherein the forward projection on said plate is located at a distance from the rear projection on said plate, so that the forward projection of said cam-lever runs on the forward projection on said plate only when the reciprocating breech block oversteps its normal front reversal position.

HANS EGLIN.

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