

# UNITED STATES PATENT OFFICE

2,145,328

## AUTOMATIC FIREARM

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Application May 29, 1937, Serial No. 145,614  
In Germany April 9, 1936

### 4 Claims. (Cl. 42-3)

In self-loading firearms, especially pistols, the elements, such as striker, striker-spring, signal bolt, extractor and the like situated in the breech were mounted in the breech from the outer side and the apertures provided for the inserting covered only more or less well. Consequently these elements were partly exposed and subjected to soiling not only by the powder gases escaping towards the rear, although in little measure, and also to access of dirt from the outside. In this known form of construction, especially in self-loading firearms with locking breech, the weight of the breech and therefore of the whole firearm had to remain comparatively heavy. The extractor mounted in pistols of known type, mostly in the front end of the breech, was either resilient in itself or oscillatable about a transverse bolt and was, in the latter instance, controlled by a spring. According to the invention the weight of the breech is reduced and the milling cuts and bores necessary heretofore can be easily made and with comparatively large tolerance, as the effect of the lock elements is no longer dependent on the absolute accuracy of the cuts and bores and as it is no longer influenced as before by slight deviations from the accurate dimensions of these cuts and bores. By the invention the result is further attained that the said elements to be accommodated in the breech are not exposed to getting dirty and can be inserted in the breech in the simplest manner.

According to the invention a comparatively wide slot is made in the breech through which elements such as striker, signal bolt, extractor and others can be inserted, and this slot is covered by an accordingly constructed cover plate, so that the elements arranged in the interior of the breech can be inserted and are accessible from the outer side.

The cover plate may be preferably constructed like an extractor. The cover plate or the cover plate forming the extractor is resilient and has projections of which the front one, situated near the claw, bears against a shoulder in the breech, a middle hook-shaped projection engaging under a nose in the recess of the breech, and the rear projection at the end engaging in a lateral recess of the sighting-notch.

Other characteristic features of the invention will be seen from the following description and claims.

Two embodiments of the invention applied to a self-loading pistol are shown by way of example in the drawing, Figs. 1 to 4 relating to one of the embodiments and Figures 5 to 8 to the other.

Fig. 1 shows part of a self-loading pistol, partly in elevation and in section.

Fig. 2 is a section on line II—II of Fig. 1.

Fig. 3 is a section on line III—III of Fig. 2.

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

Fig. 5 shows the second form of construction partly in elevation and partly in section.

Fig. 6 is a section on line VI—VI of Fig. 5.

Fig. 7 is a section on line VII—VII of Fig. 5.

Fig. 8 shows in bottom plan view the extractor shown in Fig. 5 in the form of a cover plate.

The breech 2 is slidably guided in well known manner on the frame 1 of the self-loading firearm. The breech 2 has in its upper side a comparatively wide slot 3 through which for instance the striker 4 with the striker spring 5, the signal bolt 6 and the sighting notch 7, and, as shown in the Figures 1 to 4, the extractor 8 can be inserted from above into the breech.

A plate 9 of the width of the slot serves in this form of construction for covering the slot, the front end of said plate having a projection 10 designed to bear against a shoulder 11 in the breech. A hook-shaped projection 12 on the middle portion of the plate has an arm 12a extending in the longitudinal direction and engaging under a nose 13 in the breech. A projection 14 on the rear end of plate 9 terminates in a tongue 15 engaging in a corresponding recess in the sighting notch 7. Plate 9 may preferably be resilient. It is inserted from above into the recess at 3 of breech 2, depressed and pushed towards the rear. The tongue 15 then engages in the sighting-notch 7 and the projections 10 and 12a come to bear against the corresponding shoulders 11 and 13 of the breech 2. To secure the sighting-notch 7 against shifting in lateral direction, there are two shoulders 16 which fit into the slot 3 of the breech, whereas the sighting-notch is secured against shifting in vertical direction, that is upwards, by the tongue 15 engaging in the corresponding recess. The signal bolt 6 is under the action of a spring 17 bearing against plate 9.

In the form of construction shown in Figs. 5 to 8 the cover plate 9a is constructed as an extractor. Its shape corresponds to that of the cover plate 9 in the first form of construction, with the exception that on the front end the extractor claw 18 is arranged.

As the plate 9 or the extractor 9a covers the slot in the breech 2 and as the space for holding the elements mentioned and other elements which are inserted in the breech is closed from below by the wall 20, neither powder gases nor

dust can get at the elements arranged in the breech.

The invention can be applied to all firearms in which elements are inserted in a part corresponding to the breech.

I claim:—

1. An automatic fire arm comprising a frame and a breech block mounted to slide on the frame and including a bottom and a pair of side walls defining a chamber for the reception of certain parts open at its upper side and forming a slot substantially the full length of the breech block, and a detachable cover plate adapted to be inserted in and close the slot and secured to and slidable with said breech block.

2. An automatic fire arm comprising a frame and a breech block mounted to slide on the frame and including a front end wall, a bottom, and a pair of side walls, defining together a chamber for the reception of certain parts open at its upper side and forming a slot, a detachable elastic cover plate adapted to be inserted in the slot defined by the side walls, a notched back sight at the rear end of the slot, a lug projecting from the lower face of the cover plate near its front end and arranged to engage behind the end wall of the breech block, a hook also projecting from the lower face of the cover plate, a notched transverse member in the chamber of the breech block arranged to be engaged by the hook, and a tongue defining a pair of shoulders at the rear end of the cover plate and arranged to be inserted in the notch of the back sight, the end wall and the back sight being so pitched with re-

spect to the lug and the shoulders on the cover plate that the parts engage under the elastic reaction of the cover plate.

3. An automatic fire arm comprising a frame and a breech block mounted to slide on the frame and including a front end wall, a bottom, and a pair of side walls, defining together a chamber for the reception of certain parts, a detachable elastic cover plate adapted to be inserted in a slot defined by the side walls, a notched back sight at the rear end of the slot, a pair of lugs on the sight for engaging the sides of the slot, a lug projecting from the lower face of the cover plate near its front end and arranged to engage behind the end wall of the breech block, a hook also projecting from the lower face of the cover plate, a notched transverse member in the chamber of the breech block arranged to be engaged by the hook, and a tongue defining a pair of shoulders at the rear end of the cover plate and arranged to be inserted in the notch of the back sight, the end wall and the back sight being so pitched with respect to the lug and the shoulders on the cover plate that the parts engage under the elastic reaction of the cover plate.

4. An automatic fire arm comprising a frame and a breech block mounted to slide on the frame and including a bottom and a pair of side walls defining a chamber for the reception of certain parts open at its upper side and forming a slot, a detachable cover plate adapted to be inserted in the slot defined by the side walls, and a cartridge extractor on the cover plate.

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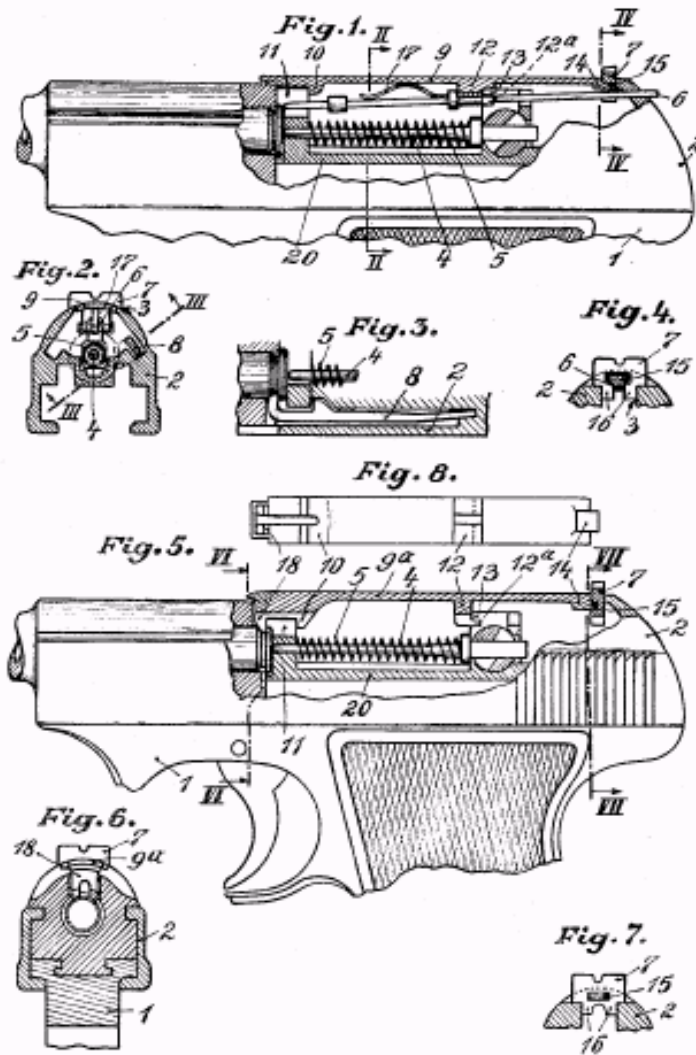
Jan. 31, 1939.

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2,145,328

AUTOMATIC FIREARM

Filed May 29, 1937



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