

Feb. 27, 1945.

M. WURZER

2,370,435

RELEASING MECHANISM FOR FIRING ACTIONS

Filed Sept. 11, 1940

FIG. 1.

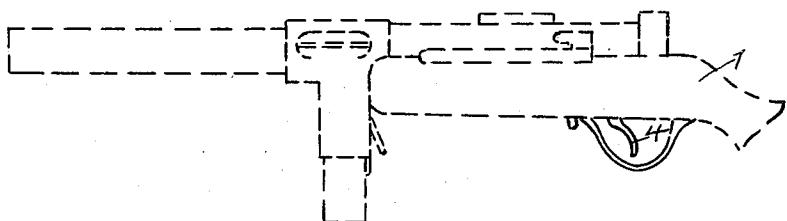


FIG. 2.

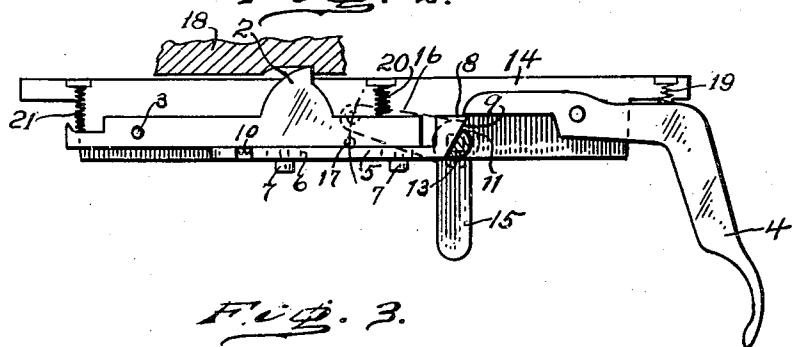


FIG. 3.

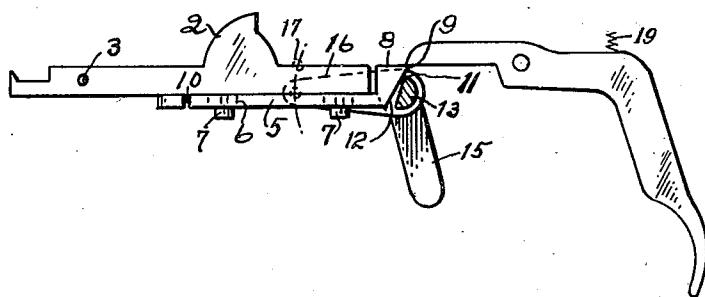


FIG. 4.

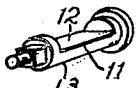
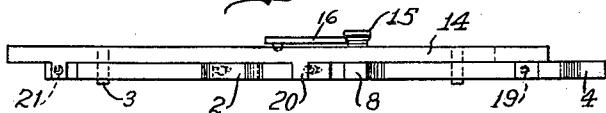


FIG. 5.



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## UNITED STATES PATENT OFFICE

2,370,435

## RELEASING MECHANISM FOR FIRING ACTIONS

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Application September 11, 1940, Serial No. 356,369

1 Claim. (Cl. 42—69)

This invention relates to the control of firing actions of machine guns, whereby a single shot can be fired, or the firing action made effective for continuous firing. It is more particularly designed for use with sub-calibre machine guns of the type commonly known as riot guns, wherein the cartridges or shells are automatically fed from a magazine into firing position.

With the above and other objects in view as will hereinafter clearly appear, my invention comprehends novel releasing mechanism for the firing action of a gun whereby one shot can be fired at a time, or a continuous firing may be effected.

It further comprehends a novel releasing mechanism having a spring pressed releasing member provided with a novel manual control.

Other novel features of construction and advantage will hereinafter more clearly appear in the detailed description and the appended claim.

For the purpose of illustrating the invention, I have shown in the accompanying drawing a typical embodiment of it, which, in practice, will give satisfactory and reliable results. It is, however, to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized, and that the invention is not limited to the exact arrangement and organization of these instrumentalities as herein set forth.

Figure 1 is a side elevation of a machine gun in conjunction with which novel releasing mechanism for the firing action is employed.

Figure 2 is a sectional elevation of the releasing mechanism.

Figure 3 is a side elevation of a portion of the mechanism.

Figure 4 is a perspective view of the cam.

Figure 5 is a top plan view of Figure 2.

Similar numerals of reference indicate corresponding parts.

Referring to the drawing:

1 designates a gun of any desired type having an automatic firing action controlled by a tensioned releasing member or sear 2 pivoted at 3 on a body portion 14 secured to the gun stock and controlled by a tensioned trigger 4 pivoted on the body portion 14 in the conventional manner for automatic firing.

In guns of the automatic type such as machine guns, and other types having an automatic firing action, it is very desirable to provide for the firing of a single shot or continuous firing each time the trigger is actuated.

In order to accomplish this result, a slide 5 has slots 6 through which headed fastening devices 7 pass into engagement with the sear 2, thereby providing for limited longitudinal movement of the slide 5 with respect to the sear.

The slide 5 at one end has an upwardly projecting arm 8 having an inclined face 9. A spring 60

10, abutting against a lug on the sear 2, tends to move the face 9 towards a cam 11 formed by a flat face 12 on a cylindrical rod 13, rotatably mounted in the body portion 14. One end of the rod 13 is non-circular to receive a handle 15. A spring 16, on the rod 13, contacts with the wall of one of a desired number of spaced recesses 17 in the side wall of the body portion 14 to retain the rod in its adjusted position.

10 The sear 2 cooperates with a conventional bolt 18.

The trigger is tensioned by a spring 19.

The sear 2 is tensioned by two balancing springs 20 and 21 positioned at opposite sides of its pivot between the sear and abutments on the body portion 14.

The operation will now be clear to those skilled in this art and is as follows:

When a cartridge has been fired, it is ejected and a fresh cartridge is automatically fed from the magazine into firing position.

If the cam 11 is in the position seen in Figure 2, the flat face 12 of the cam is parallel with the inclined face 9 on the arm 8 of the slide. If the trigger is pulled with the parts in such position, the forward end of the trigger will press downwardly on the arm 8 and the slide 5 and sear 2 will rock downwardly on the pivot 3 and the sear will release the bolt. The trigger will be retained on the arm 8 and the sear will be retained out of engagement with the bolt so that full automatic or continuous firing will occur until the trigger is released. The arm 8 does not move forwardly at such time a sufficient distance to release the trigger.

35 If one desires to fire single shots, the cam 11 is adjusted by the handle 15 into the position seen in Figure 3. When the trigger is now pulled, the slide 5 will move forwardly on the sear a sufficient distance to permit the forward end of the trigger to clear the arm 8 and the balancing springs 20 and 21 will cause the sear to return to its bolt engaging position.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

In a control mechanism for fire arms, a sear pivotally supported intermediate its ends and normally in bolt engaging position, resilient means 50 tending to retain said sear in its bolt engaging position, a slide mounted on said sear for limited longitudinal movement with respect thereto, and having an arm extending in rear of the rear end of said sear and provided with an inclined face, a spring tending to move said slide rearwardly, a manually actuated, rotatable cam against which said inclined face bears, and a trigger bearing 55 against said arm to rock said sear on its pivot.

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