W. D. CORTNER.

FIREARM.

APPLICATION FILED JAN. 22, 1919.

1,303,032.

Patented May 6, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

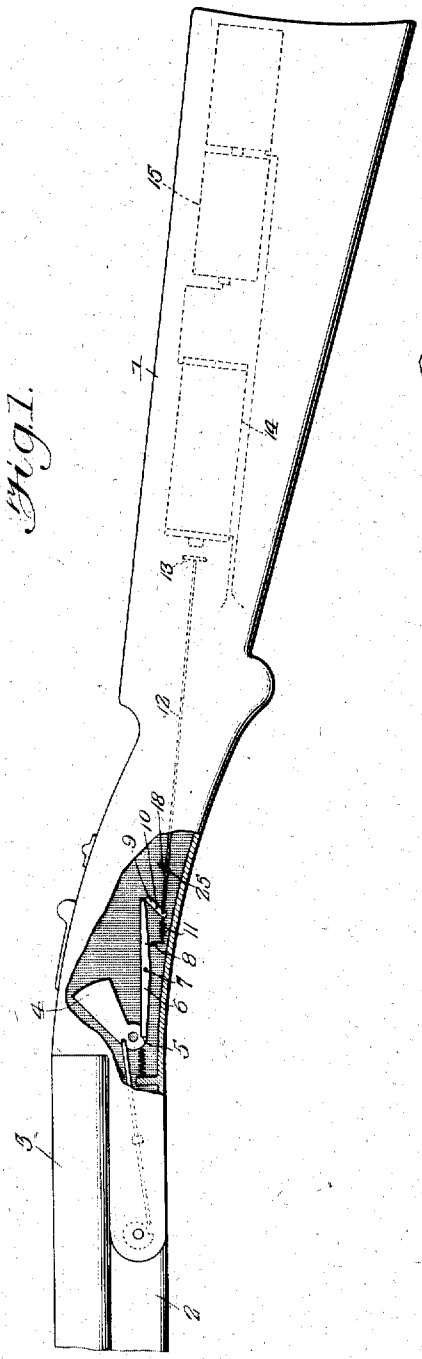


Fig. 5.

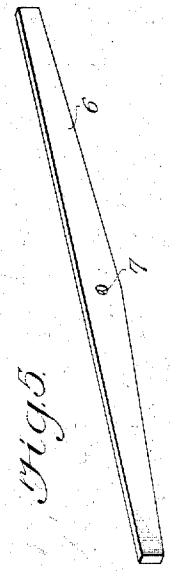
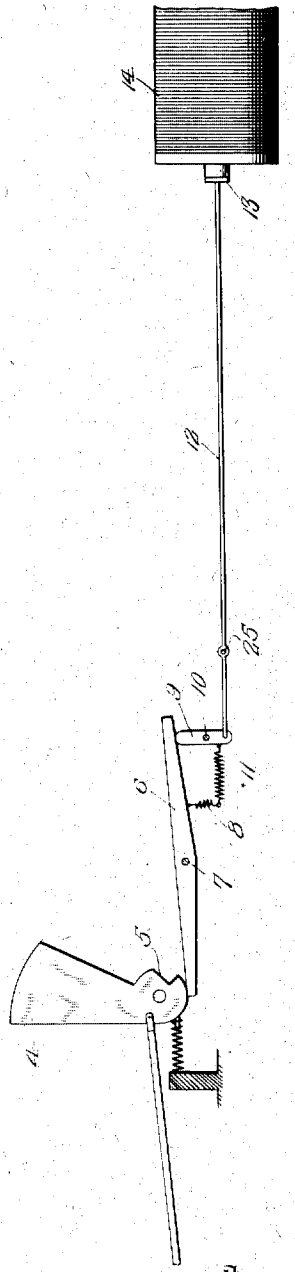


Fig. 4.



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2 SHEETS—SHEET 2.

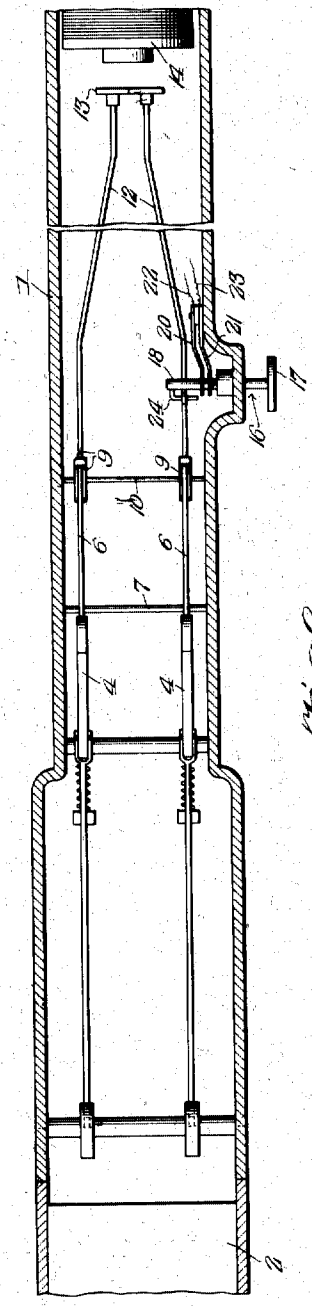


Fig. 2.

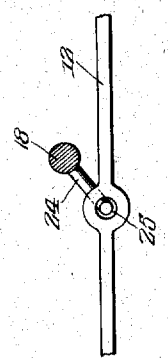


Fig. 6.

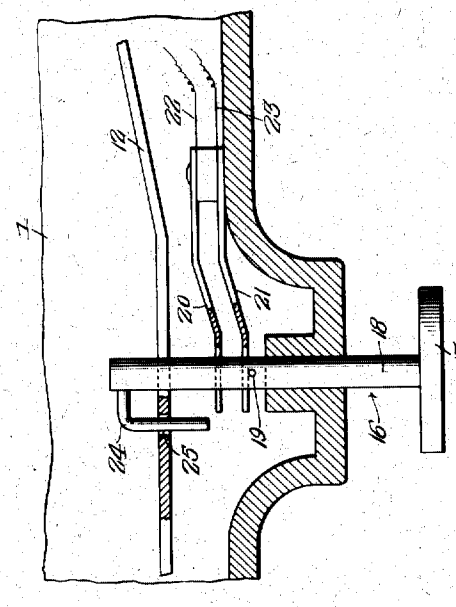


Fig. 3.

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UNITED STATES PATENT OFFICE.

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FIREARM.

1,303,032. Specification of Letters Patent. Patented May 6, 1919.

Application filed January 22, 1919. Serial No. 272,493.

To all whom it may concern:

Be it known that I, WHEELER D. CORTNER, a citizen of the United States, residing at Osawatomie, in the county of Miami and State of Kansas, have invented new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to fire arms, the object in view being to eliminate the trigger and substitute therefor electrical hammer operating means, whereby the hammer is released by simply pressing upon a switch, preferably in the form of a push button.

A further object of the invention is to provide in connection with a fire arm embodying a plurality of barrels and firing chambers, electrically operated hammer releasing means of such a character that a series of hammers may be successively released for the purpose of successively firing the charges contained in the barrels of the fire arm.

With the above and other objects in view the invention consists in the novel construction, combination and novel arrangement of parts, herein fully described, illustrated and claimed.

In the accompanying drawings:

Figure 1 is a side elevation partly in section of a fire arm embodying the present invention;

Fig. 2 is an enlarged fragmentary horizontal section through the same;

Fig. 3 is also a fragmentary horizontal section showing the switch and the means for releasing the hammer; and

Fig. 4 is an enlarged fragmentary vertical longitudinal section illustrating the hammer releasing mechanism.

Fig. 5 is a perspective view of the hammer-holding latch, and

Fig. 6 is a broken detail view of means for holding the armature-carrying rod against movement.

Referring to the drawings, 1 designates the stock of a fire arm, 2 the fore stock and 3 the barrel or barrels thereof. In carrying out the present invention, I employ in connection with each of the barrels 3 a firing hammer 4 having a hold back shoulder 5 with which coöperates a two-armed latch 6 which is pivotally mounted at 7 within the frame or stock of a gun, the forward end of said latch being normally held yieldably in engagement with the shoulder 5 by means of a spring 8 which engages the rear arm of the latch 6 and serves to hold down such rear arm.

Coöperating with the rear arm of the latch 6 is a trip lever 9 which is fulcrumed at an intermediate point 10 within the stock of the fire arm. A spring 11 is connected to the lower arm of said trip lever 9 and serves to hold the upper arm of said lever rearwardly so as to permit the forward extremity of said latch to engage the shoulder 5 of the hammer 4. Attached to the lower arm of the trip lever 9 is a connecting rod 12 having at its rear end an armature 13 adapted to be attracted by an electromagnet 14, the latter adapted to be energized by a battery 15, mounted within the stock 1 of the fire arm.

16 designates the switch for closing the battery and magnet circuit, said switch comprising, in the preferred embodiment of the invention, a push button 17 and an inwardly extending stem 18. The stem 18 carries a contact piece 19 which is adapted to bridge other contact pieces 20 and 21 to which are attached circuit wires 22 and 23 which include the battery 15 and the electromagnet 14. Therefore, when the push button 17 is moved inwardly it closes the circuit and energizes the electromagnet 14 by means of the battery 15.

The stem 18 of the switch carries a laterally projecting catch finger 24 which is adapted to engage a hole 25 in the connecting rod 12 when the switch is in its outermost position. The arrangement is such that as the push button 17 is pressed inwardly, the switch closes the circuit referred to and energizes the magnet 14, thereby attracting the armature 13. As the movement of the stem 18 continues in an inward direction, the catch finger 24 moves out of engagement with the connecting rod 12, releasing the same and permitting the armature 13 to be attracted by the magnet 14. When this occurs, the rod 12 moves rearwardly and turns trip lever 9, causing the latter to elevate the rear end of the latch 6 and depress the forward end of said latch out of engagement with the hold back shoulder 5 of the hammer 4. This releases the hammer 4 which then moves toward its firing position. When the switch is released it moves backward to its initial position and the trip lever 9 and the connecting rod 12 are retracted to their initial position by the spring 11.

When the fire arm comprises a plurality of barrels and firing chambers, a corresponding number of hammers and hammer operating connections will be employed and each connecting rod 12 will be provided with an armature 13 that will be attracted by the magnet 14. In this case the stem 18 will be provided with a plurality of said fingers 24 of varying lengths so that the several hammers will be successively released by continuing the inward movement of the stem 18.

The improvement above described is particularly adapted for use in connection with a fire arm of the "break down" type in which the hammers are automatically cocked or reset as the barrel or barrels are moved back toward their normal position. The invention is adapted for use in connection with any fire arm of a single, double or multiple barrel type and used either for firing shells, cartridges or other projectiles of any kind.

Having thus described the invention, what is claimed as new is:—

1. In a fire arm, the combination of a barrel, a stock, a stock contained battery, an electro-magnet adapted to be energized by said battery, a hammer, a hammer hold-back latch, a latch operating trip lever, an armature adapted to be attracted by said magnet, a connecting rod between said trip lever and armature, and a switch adapted to close the magnet and battery circuit and having means for holding and releasing said connecting rod.

2. In a fire arm, the combination of a barrel, a stock, a stock contained battery, an electro-magnet adapted to be energized by said battery, a hammer, a hammer hold-back latch, a latch operating trip lever, an armature adapted to be attracted by said magnet, a connecting rod between said trip lever and armature, a switch adapted to close the magnet and battery circuit and having means for holding and releasing said connecting rod, and yieldable means for retracting said trip lever and connecting rod.

3. In a fire arm, the combination of a plurality of barrels, a stock, a stock contained battery, an electro-magnet adapted to be energized by said battery, a plurality of hammers, a plurality of hammer hold-back latches, a plurality of latch operated trip levers, a plurality of armatures adapted to be attracted by said magnet, connecting rods between said trip levers and armatures, and a switch adapted to close the magnet and battery circuit and having means for holding and successively releasing said connecting rods.

In testimony whereof I affix my signature.

WHEELER D. CORTNER.