(No Model.)

W. H. DRIGGS.

MECHANISM FOR FIRING BREECH LOADING ORDNANCE.

No. 493,987. Patented Mar. 21, 1893.

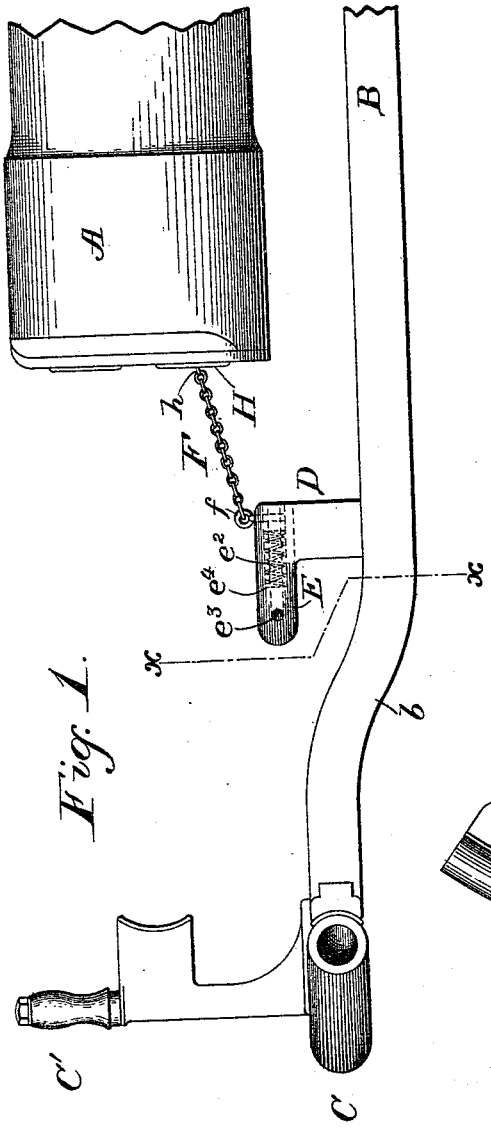


Fig. 1.

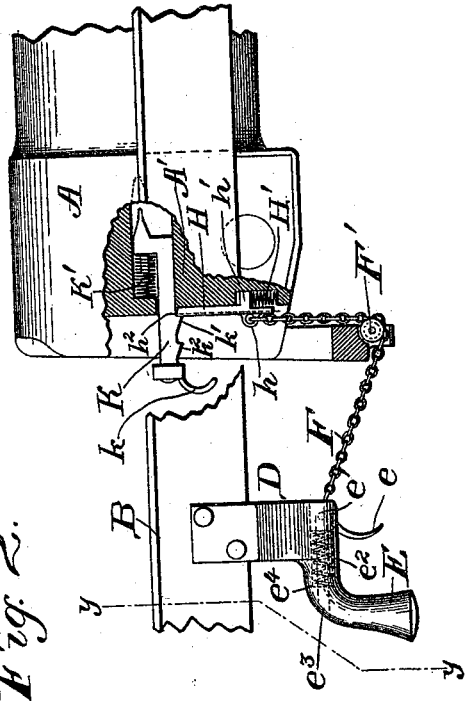
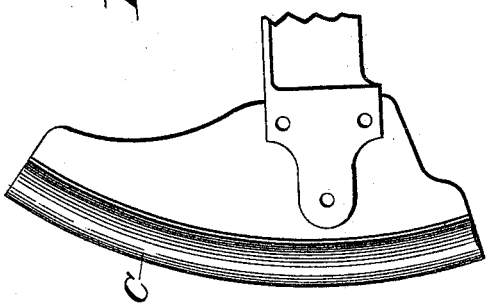


Fig. 2.



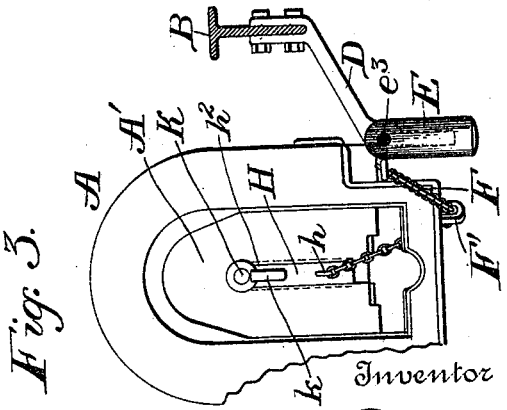


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM H. DRIGGS, OF WASHINGTON, DISTRICT OF COLUMBIA.

MECHANISM FOR FIRING BREECH-LOADING ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 493,987, dated March 21, 1893.

Application filed November 12, 1892. Serial No. 451,760. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HALE DRIGGS, a lieutenant in the United States Navy, and a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Mechanism for Firing Breech-Loading Guns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in mechanism for firing breech-loading cannon, and it specially relates to that class of cannon mounted upon recoil mounts where the gun recoils in the line of fire, and is brought back to the initial position by suitable springs.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a plan view of the breech and directing bar of a gun of that type known in the United States naval service as the "Driggs-Schroeder" type. Fig. 2 represents a side elevation of the device shown in Fig. 1, parts being broken away; and Fig. 3 represents a section made by the lines $y\ y$ in Fig. 2, and $x\ x$ in Fig. 1, looking to the right.

A represents the gun provided with a breech-block A′, and adapted to move parallel with the directing bar B. This directing bar is preferably bent as at b in order that the shoulder piece C and handle C′ may be more immediately to the rear of the gun.

The directing bar is provided with an arm D bent inward as shown in Fig. 3, and carrying at its lower end the grip-piece E. The trigger e projects from the plunger e' the two forming a sliding piece which is normally pressed forward by a spring e^2 fitting in an enlarged portion of the hole e^3 at the upper portion of the grip piece. This spring e^2 is held between the plunger e' and a shoulder e^4 at the rear portion of the enlargement of the hole e^3. The pin f passes through a slot at the inner side of the grip piece in which it has a limited motion longitudinally. The inner end of this pin is secured in the plunger e', and the outer end of this said pin is in the form of an eye which is connected to the chain F, which, passing over the roller F′ is connected to the eye h on the back of the sliding sear H. This sliding sear is provided with a projecting arm h' which is normally pressed forward by the spring H′, and the upper end h^2 of the said sear is normally pressed upward against the firing-pin K. This firing pin is normally pressed forward by the spring K′, but is held at full cock, and at half cock, respectively, by the teeth k' and k^2, which engage the upper end h^2 of the sliding sear H as shown in Fig. 2.

k represents the hand lug by which the firing pin may be drawn to the rear and cocked by hand.

The operation of the device is as follows:—The gun being loaded, the firing-pin is cocked, the gun is brought to bear on the target, and the trigger e is pulled by one or more fingers of the right hand which has meantime been holding the grip-piece E firmly, and steadying the gun therewith. The gun recoils, slackening the chain F, but tautening it again when it returns to the initial position on the counter recoil. By having the grip piece and trigger on the directing bar instead of on the gun, as has hitherto been largely the practice, the gun-servant sighting the gun is able to use both hands in pointing and steadying the gun on the target, and then to fire the gun without moving either hand, and without any fear of injury from the recoil.

It will be evident that many modifications would readily suggest themselves to anyone skilled in the art, which could be used without departing from the spirit of my invention.

I claim as new and desire to secure by Letters Patent of the United States—

1. In a recoil mount for breech-loading guns, the combination with a sliding piece attached to the gun-mount, and firing mechanism attached to the gun, of a flexible connection between the two whereby said firing mechanism may be operated by said sliding piece, substantially as described.

2. In a recoil mount for breech-loading guns, the combination with a sliding piece attached to the gun mount, of a spring operated firing pin attached to the gun, a sear for holding said firing pin, and a flexible connection between said sliding piece and said sear, where-

by said firing pin may be released, substantially as and for the purposes described.

3. In a recoil mount for breech-loading guns, the combination with a grip piece attached to the gun mount, and a trigger attached to said grip piece, of a spring-operated firing pin attached to the gun, a sear for holding said firing pin, and a flexible connection between said trigger and said sear whereby said firing pin may be released, substantially as and for the purposes described.

4. In a recoil mount for breech-loading guns, the combination with the directing bar B, and grip piece E attached thereto, of the trigger *e* and plunger *e'* adapted to slide longitudinally in said grip piece, the chain F connected to said plunger, and passing through suitable guides, the spring-operated pin K having teeth on the lower side thereof, and the spring operated catch H connected to said chain F and adapted to engage said teeth in the firing pin, substantially as and for the purposes described.

5. In a recoil mount for breech-loading guns, the combination with the directing bar B of the arm D and grip piece attached thereto, the trigger *e* and plunger *e'* adapted to slide longitudinally in said arm D, the chain F connected to said plunger and passing through suitable guides, the sliding sear H connected to said chain, the spring H' normally pressing said sear upward, the firing pin K having teeth adapted to engage said sliding pawl, and the spring K' normally pressing said firing pin toward the cartridge, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. DRIGGS.

Witnesses:
JOHN C. WILSON,
PERCY C. BOWEN.