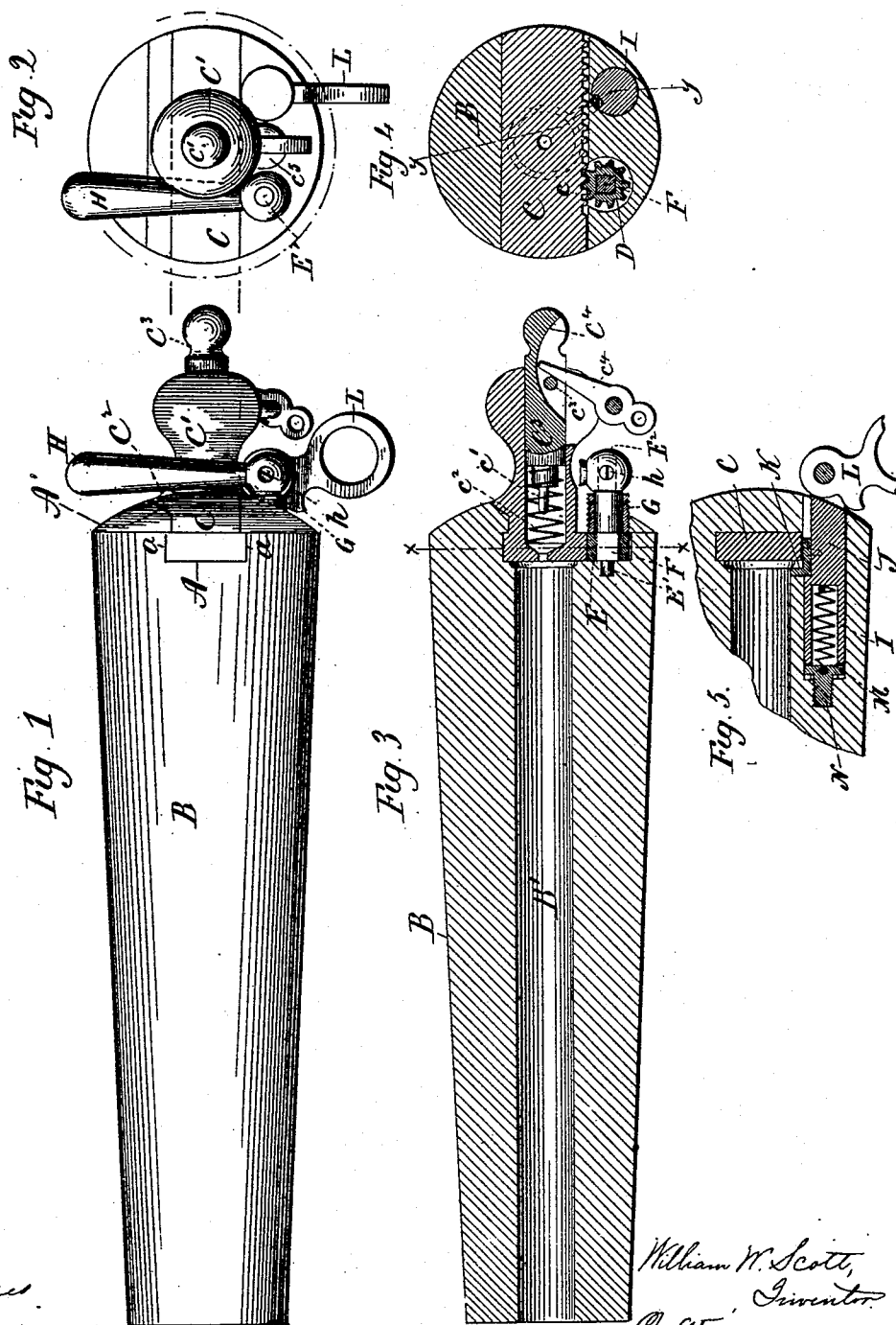


(No Model.)

W. W. SCOTT.
YACHT CANNON.

No. 581,495.

Patented Apr. 27, 1897.



Witness
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UNITED STATES PATENT OFFICE.

WILLIAM W. SCOTT, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
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YACHT-CANNON.

SPECIFICATION forming part of Letters Patent No. 581,495, dated April 27, 1897.

Application filed August 2, 1893. Serial No. 482,142. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. SCOTT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Yacht-Cannon, (Case B;) and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the
10 same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a cannon constructed in accordance with my invention; Fig. 2, a view thereof in rear elevation with the breech-block shown in its closed
15 position, its open position being indicated by broken lines; Fig. 3, a view of the gun in vertical longitudinal central section; Fig. 4, a view thereof in vertical section on the line $x x$ of Fig. 3; Fig. 5, a broken view of the gun in
20 vertical longitudinal section on the line $y y$ of Fig. 4.

My invention relates to an improvement in small breech-loading cannon of the type commonly called "yacht-cannon," the object being to provide a simple, safe, and easily-operated gun in which provision is made for
25 positively opening and closing the breech-block.

With these ends in view my invention consists in a cannon having a longitudinal slot extending transversely across its breech and opening rearward, a breech-block arranged
30 to slide in the said slot, and means connected with the said block for sliding it back and forth.

My invention further consists in a cannon having certain details of construction and combinations of parts, as will be hereinafter
40 described, and pointed out in the claims.

In carrying out my invention I form a longitudinal horizontal slot A in the extreme rear end of the breech of the gun B, the inner portions of the upper and lower walls of
45 the said slot being undercut, as at $a a$. The said slot is of uniform width, and, as shown, extends transversely across the center of the breech of the gun and opens rearward. The sliding breech-block C of the gun is adapted
50 to fit into the said slot and to slide back and forth therein, and is provided midway be-

tween its ends with a central rearwardly-projecting knob C' of ordinary form.

To adapt the block to fit into the slot A and the undercuts $a a$ thereof, it is formed with
55 an upwardly-projecting shoulder which enters the upper undercut a and a downwardly-projecting shoulder which enters the lower undercut a . The lower shoulder of the block is cut to form a rack c, which is engaged by
60 a pinion D, located in a cylindrical chamber E, open at its outer end and formed in the breech of the gun at a point below and at one side of a vertical line passing through the
65 bore B' thereof.

I may remark here that it is necessary to locate the pinion to one side of the bore of the gun in order to provide for moving the block sufficiently to clear the open rear end
70 of the bore B' of the gun, so as to permit the free introduction and extraction of the cartridges. When the pinion is located to one side of the bore, it engages with the block to one side of the longitudinal center thereof
75 and provides for throwing the same sufficiently to clear its opposite end entirely from the bore. The said pinion is formed, as herein shown, by cutting teeth upon a shaft F, which
80 is held in place in the chamber E by means of a threaded collar G, the inner end of which engages with the outer edge of the pinion.

The extreme inner end of the shaft, which is reduced, has bearing in a socket E', formed to receive it at the inner end of the chamber E, while the enlarged middle portion of the
85 shaft has bearing in the collar G. The extreme outer end of the shaft is provided with a square shank E², which receives the operating-handle H, which is secured to the shank
90 by a screw h .

The pinion and rack are combined, so that when the handle H is brought into vertical position the block C will close the breech of the gun. By throwing the handle outward
95 the breech-block is moved radially outward and the breech opened. I thus provide for a positive operation of the breech-block, which I am enabled to move very readily back and forth. In case the block becomes stuck or
100 bound, by reason of corrosion of the metal or for any other reason, the leverage secured by the handle enables it to be started and opened.

To render the loading of the gun more convenient, I bevel the outer end of the upper wall of the slot A, as at A', and construct the upper edge of the breech-block C with a corresponding extension C². This construction enables a person standing above the gun to load it with more facility. The handle or lever might be replaced by a wheel. As arranged, the handle engages with the knob to limit the sliding movement of the breech-block in either direction, stopping it in its full open and closed positions.

The knob C' of the breech-block is longitudinally chambered to receive a firing-hammer C³, provided at its forward end with a firing-pin c' and normally retired by means of a hammer-spring c², interposed between the forward end of the hammer and the forward end of the bore formed in the block and knob. The outer end of the hammer is constructed with a slot C⁴, containing a pin c³, which is engaged by the inner end of a firing-lever c⁴, hung below the knob on a staple c⁵, depending therefrom, the outer end of the said lever being perforated for the attachment of the firing-cord, which is not shown. The said firing mechanism may be replaced by any other suitable devices for the same purpose. I do not claim it in this application, having elected to claim it in another application executed in even date herewith and serially numbered 482,141.

This gun may be provided with an extractor of any approved construction. As herein shown, the breech of the gun is constructed with a longitudinal chamber I, located opposite the pinion D and shaft F and in the same horizontal plane therewith. The said chamber receives an extractor-slide J, having an extractor K attached to its upper edge, provided at its outer end with a pivotal operating-piece L and having its forward end chambered to receive an extractor-spring M, the rear end of which is secured to the wall. The forward end of the spring is attached to a screw N, entered into the gun at the forward end of the said chamber I. I do not in this application claim the said extractor, which I have claimed in another application executed of even date herewith and before referred to.

It is apparent that in carrying out my invention some changes from the construction herein shown and described may be made, and I would therefore have it understood that I do not limit myself to the exact construction shown herein, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. I am aware, however, that a cannon constructed in its breech with an opening to receive a breech-block operated by a rack and pinion is old, and I do not claim that construction broadly.

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

1. A breech-loading cannon having a horizontally-arranged longitudinal slot extending entirely across its breech and opening rearward, and also having a pinion-chamber and an extractor-chamber formed in its breech below the said slot and opening rearward; a horizontally-movable sliding breech-block located in the said slot, provided upon its lower edge with a rack and constructed with a centrally-arranged rearwardly-projecting knob; a pinion meshing into the said rack, and located in the said pinion-chamber; a handle or lever connected with the said pinion for rotating the same to slide the block positively back and forth, and located to the rear of the breech of the cannon and the body of the said block; firing devices located in the said knob; and an extractor located in the said extractor-chamber, substantially as described.

2. A breech-loading cannon having a longitudinal slot extending transversely across its breech and opening rearward; a sliding breech-block located in the said slot, constructed upon its lower edge with a rack, and also constructed with a central outwardly-projecting knob; a pinion located in a chamber formed in the breech of the gun below the said slot and to one side of the bore of the gun, and meshing into the said rack; a handle or lever for rotating the said pinion to slide the said block positively back and forth, and arranged to engage with the knob of the block which limits its movement; firing devices mounted in the knob of the block, and an extractor, substantially as described.

3. A breech-loading cannon, having a horizontally-arranged longitudinal slot extending entirely across its breech, and opening outward, the inner portions of the upper and lower walls of the said slot being undercut, and the outer portion of the upper wall of the slot being beveled or cut away, a sliding breech-block located in the said slot and constructed with an upwardly and a downwardly projecting shoulder entering the said upper and lower undercuts of the slot, and having its upper portion provided with an extension corresponding to the beveled portion of the breech, a rack located upon the lower shoulder of the block, a pinion located below the lower wall of the slot and coacting with the rack for positively sliding the breech-block back and forth therein, a handle connected with the pinion for operating it to slide the block, firing mechanism located in the knob of the block, and an extractor.

4. A breech-loading cannon having a slot in its breech, the outer end of the upper wall of the slot being beveled or cut away, a sliding breech-block located in the said slot, and having its upper edge provided with an extension corresponding with the said beveled portion of the breech, and means for positively sliding the said block back and forth, substantially as described.

5. A breech-loading cannon having a slot formed in the extreme rear end of its breech

and opening rearward, a sliding breech-block located in the said slot and constructed with a rack and with a central rearwardly-projecting knob, firing devices mounted in the said
5 knob, a pinion mounted in the breech and meshing into the said rack, and a lever or handle for rotating the said pinion to slide the block positively back and forth, the said handle being constructed to engage with opposite
10 points on the knob to limit the movement, in

either direction, of the block, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WM. W. SCOTT.

Witnesses:

FRED C. EARLE,
LILLIAN D. KELSEY.