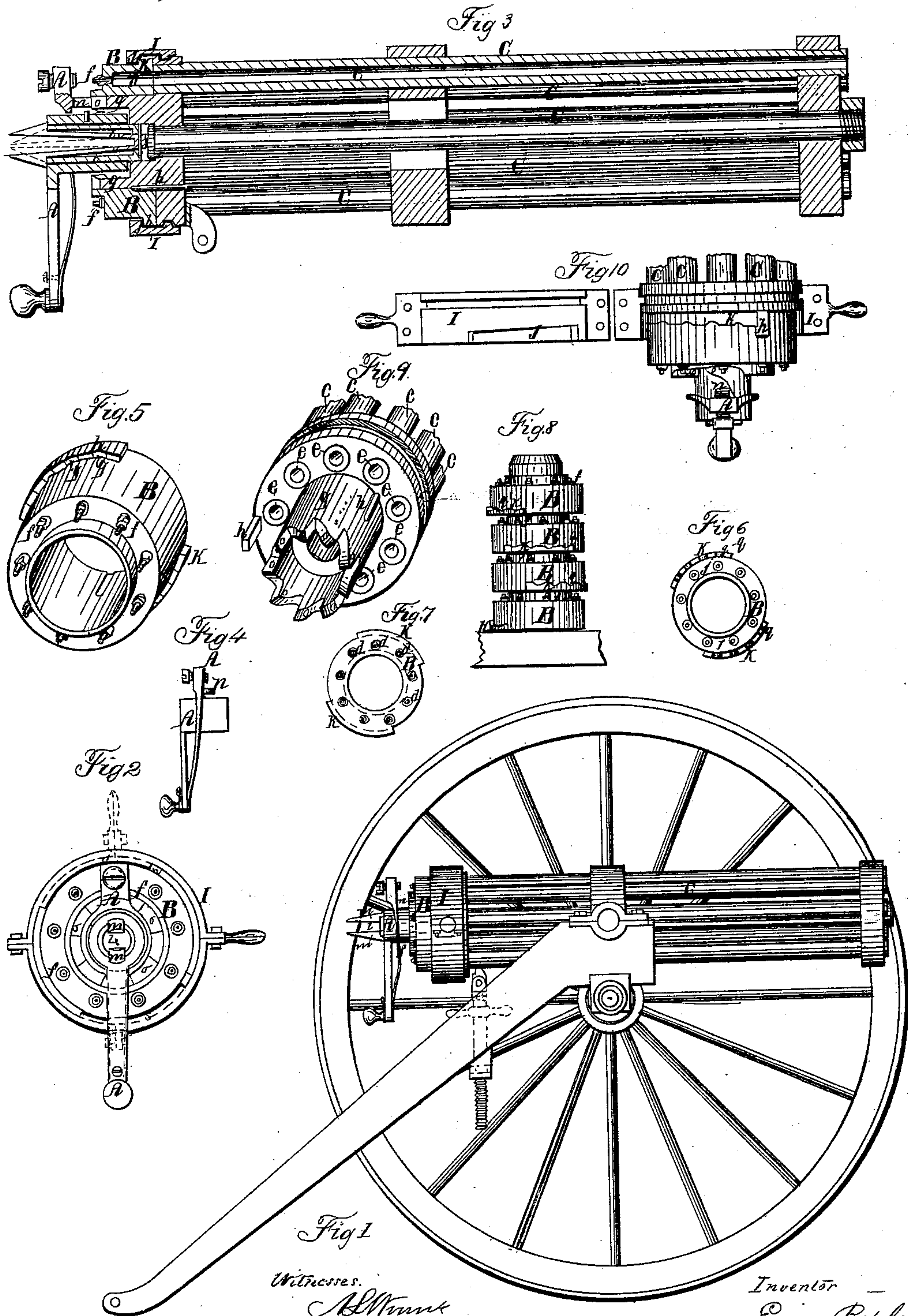


E. RIPLEY.
Machine Gun.

No. { 2,540.
33,544. }

Patented Oct. 22, 1861.



Witnesses.
A. W. Hunt
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UNITED STATES PATENT OFFICE.

EZRA RIPLEY, OF TROY, NEW YORK.

IMPROVEMENT IN REPEATING-GUN BATTERIES.

Specification forming part of Letters Patent No. 33,544, dated October 22, 1861.

To all whom it may concern:

Be it known that I, EZRA RIPLEY, of the city of Troy, in the county of Rensselaer and State of New York, have invented a certain new and Improved Repeating Fire-Arm or Gun Battery; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, in which—

Figure 1 is a side elevation of one of my improved repeating-guns mounted on a carriage for field use, one of the two wheels of the carriage being removed. Fig. 2 is an elevation of the rear end; and Fig. 3, a central vertical longitudinal section of the same gun, but on a larger scale. Fig. 4 is a side view of the rotary detachable spring-hammer, by which the gun is discharged. Fig. 5 is an isometrical drawing; Fig. 6, a plan of the rear end, and Fig. 7 a plan of the front end, of one of the separable many-chambered breech-rings of the same gun; and Fig. 8 shows a pile of four of those breech-rings upon a stand. Fig. 9 is an isometrical drawing of the rear end of the series of barrels where the chambered breech-ring is to be attached, and Fig. 10 is a top view of the same with one of the breech-rings and the separable discharging-hammer attached.

The same letters refer to like parts in all the figures.

My improved repeating fire-arm or gun battery consists essentially of three distinct and separable parts, all constructed and arranged and secured together substantially as follows, to wit:

First. A series of pistol, rifle, musket, or larger gun barrels, C, open at both ends and arranged and secured together in the form of a skeleton-cylinder upon any suitable stock or support—as, for example, upon a gun-carriage for field service, substantially as shown by Fig. 1, or upon a platform or swivel for use in fortifications, or on the decks, bulwarks, or tops of war-vessels, or on row-boats or overland passenger or express coaches, or in other similar situations.

Second. A breech lock or ring, B, entirely separable from the cylindrical series of barrels C, and having a cylindrical series of charge-chambers, *d*, of the same number and distance apart as the bores *e* of the barrels C, and all

open at one end of the breech-ring, but closed at the other end, except a passage to the percussion-priming through the cap nipples *f*, or their equivalent, for percussion-firing. The rear end of the cylindrical series of barrels C is so shaped and provided with a guiding-core, *g*, and steady-pin *h*, and the breech-ring B is so formed in respect thereto, that the person who works the gun can freely place the breech-ring B upon and slide it along the said guides *g h* toward and from the barrels C, and so that the open ends of all the breech-chambers *d* will coincide with and fit closely against the rear ends of the bores of the barrels; and the breech-ring B is fastened to the rear end of the barrels, so as to be ready for firing, by means of a hand-ring, I, secured to but so that it can be freely turned upon the cylinder of barrels, and provided with wedge-shaped lugs *j j*, arranged to engage with corresponding lugs, *k k*, on the breech-ring, substantially as shown by the annexed drawings, or by equivalent means. The recesses *q* in the lugs *k k* are to receive the dirt or imperfectly-burned powder which might accumulate on the face of the lugs and interfere with the free movement of the hand-ring I.

Third. A rotary spring-hammer, A, entirely separable, as shown by Fig. 4, from both the breech-ring B and the cylinder of barrels C, and formed and arranged so as to be readily slid on and off and turned upon an axis, *l*, Fig. 3, substantially in line with the axis of the breech-chambers *d* and cylinder of barrels C, and held thereon by self-acting catches *m*, which can be instantly moved by hand so as to allow the quick detachment of the hammer, and provided with a cam-follower, *n*, Figs. 10 and 3, which, as the hammer is turned, rides snapping along over a series of ratchet-shaped cams, *o*, Figs. 9 and 10, so as to thereby cause the hammer to strike a blow upon each of the cap-nipples *f* in succession, all substantially as shown and indicated by the annexed drawings.

To reload and fire the piece just after it has been discharged, the gunner first by one hand pinches the catch-springs *m* together, as indicated by dotted lines in Fig. 3, and with the other hand pulls off the hammer A, and then turns the clamp-ring I against a stop, *p*, as shown by dotted lines in Fig. 2, to release the

breech-ring B, which he then pulls off to recharge and prime anew. He next slips a charged and primed breech-ring, B, back upon the guides *g h* and against the breech end of the barrels, and turns the clamp-ring I back to its position (shown by full lines in Fig. 2) to secure the breech-ring to the barrels; and then he shoves the hammer A over the catch-springs *m* onto its spindle *l*, as shown in Fig. 3, when the piece is ready for firing; and this latter operation he fully effects by simply turning the hammer A once around by hand, either step by step to give single shots, or continuously through any part or the whole of the revolution to fire any desired number of the shots in slow, quick, or instantaneous succession, as circumstances shall demand. With the breech-rings previously charged they can be thus successively applied and fired very rapidly.

Now I do not broadly claim the combination of a rotary spring-hammer with a cylindrical series of barrels and breech-chambers, more or less detachable, an example being shown in United States Patent No. 14,820, A. D. 1856,

nor the use of a separable many-chambered breech-bar with a series of barrels and a hammer for discharging them successively, as suggested in English Letters Patent No. 217, A. D. 1858; but limit my claim to a particular construction and arrangement of parts, substantially such as hereinbefore specified, and shown by the annexed drawings.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

The detachable rotary discharging-hammer A and separable many-chambered breech-ring B, when they are constructed and secured, in combination with the cylindrical series of barrels C, so as to permit convenient and rapid firing and the ready detachment and reattachment of the said chambered breech-ring and hammer, substantially as herein described and shown.

EZRA RIPLEY.

Witnesses:

A. L. WINNE,
GEO. F. ELLS.