

## United States Patent Office.

ROBERT HENRY ARMIT, OF LONDON, ENGLAND, ASSIGNOR OF ONE-HALF TO THOMAS MCCULLOCH, OF SAME PLACE.

## MACHINE-GUN.

SPECIFICATION forming part of Letters Patent No. 446,807, dated February 17, 1891.

Application filed March 13, 1888. Serial No. 267,077. (No model.) Patented in England November 25, 1885, No. 14,482; in France February 2, 1886, No. 173,922; in Germany February 2, 1886, No. 36,351; in Belgium February 9, 1886, No. 71,907; in Italy February 9, 1886, and in Austria-Hungary May 29, 1886.

To all whom it may concern:

Be it known that I, ROBERT HENRY ARMIT, retired lieutenant of Her Majesty's Navy and lately a captain and honorary major in Her 5 Majesty's auxiliary forces, a subject of the Queen of Great Britain, and a resident of London, England, have invented new and useful Improvements in Machine and other Guns, (for which I have obtained patents in the fol-10 lowing countries: in Great Britain, No. 14,482, dated November 25, 1885; in France, No. 173,922, dated February 2, 1886; in Belgium, No. 71,907, dated February 9, 1886; in Germany, No. 36,351, dated February 2, 1886; in 15 Austria-Hungary, dated May 29, 1886, and in Italy, dated February 9, 1886,) of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to machine or battery 20 guns and all quick-firing guns used with cartridges wherein the powder is inclosed or contained in wrapped or solid-drawn metallic

cases or envelopes. In the use of such guns it sometimes hap-25 pens that during the operation of extracting an empty cartridge-shell the head or base of the said shell becomes detached from the cylindrical or tubular part thereof, leaving the latter in the chamber of the gun, or the cylin-30 drical or tubular part of the said shell is broken or torn asunder and a portion thereof left in the said chamber. When an accident of this kind occurs to a machine or other gun as ordinarily constructed, the gun is rendered 35 inoperative, for the reason that a fresh cartridge cannot be inserted into the chamber until the remaining portion of the empty cartridge-shell is extracted and the chamber thus cleared. Guns having two or more barrels are 40 sometimes rendered inoperative by the obstruction of one of the said barrels in this manner. Moreover, in practice the fact that part of an empty cartridge-shell has been thus left in the chamber is usually not observed until 45 an attempt is made to force another cartridge therein, thus crushing or compressing the remaining portion of the empty shell and jamming the same tightly in the chamber.

improved construction in that class of ma- 50 chine-guns designed to avoid this difficulty; and to this end it consists in the novel construction and combination of parts hereinafter described, reference being had to the ac-

companying drawings, in which—

Figure 1 is a vertical longitudinal central section of part of a gun-barrel with my improvements applied thereto. Fig. 2 is a rear end elevation of the said barrel. Fig. 3 is a side elevation of the false chamber or bush- 60 ing detached. Fig. 4 is a side elevation of a key for inserting the said chamber or bushing into the barrel and withdrawing it therefrom. Fig. 5 is a side elevation, and Fig. 6 a rear elevation, showing a modified form of my 65 false chamber or bushing. Fig. 7 is a side elevation, and Fig. 8 a rear elevation, of a key, hereinafter described.

Like letters indicate corresponding parts throughout the drawings.

A is the barrel.

B is a chamber or bushing of steel or other metal, which is preferably made more or less taper externally toward its front or inner end, as shown in Figs. 1 and 3, to facilitate its 75

withdrawal from the barrel.

The chamber or bushing B (shown in Figs. 1 to 3) is provided with an intermittent screw b, and corresponding segmental screw-threads are formed at a in the barrel A. The said 80 chamber or bushing can therefore be readily inserted into the barrel, and can be firmly secured in position therein by turning it through a small angle, and thereby causing its screwthreads to engage with the internal screw- 35 threads of the barrel. The said chamber or bushing B is, as above stated, made of such internal form and dimensions that a cartridgeshell will fit therein.

To facilitate the insertion and withdrawal 90 of the said chamber or bushing, I form the same with slots or notches b', into which the key C, Fig. 4, can be introduced for the purpose of unscrewing or screwing up the said chamber or bushing. I prefer, moreover, to 95 form recesses or cavities  $b^2$  at the inner ends of the said slots or notches b' and to make the The object of my invention is to provide an I said key with spring-arms C', provided with

size with the recesses or cavities b. When the key is inserted in the notches b', its arms C' will be forced inward, and its projections 5  $C^2$  will then enter the recesses or cavities  $b^2$ , so that I am enabled after unscrewing the chamber or bushing B to withdraw the same from the barrel by means of the said key. One of the said notches b' permits the ex-10 tractor to engage with the flange of a cartridgecase in the barrel.

In the modification of my invention illustrated in Figs. 5 and 6 the false chamber or bushing is made with a collar or gas-check b3, 15 which fits into a corresponding recess in the barrel. Slots or notches b' are formed in this collar to receive the projections C2 of the key C, Figs. 7 and 8. This key is, moreover, provided with a pin or stud C3, adapted to enter 20 a hole  $b^4$  in the chamber or bushing to retain 1

projections C2, corresponding in shape and I the said key in place while in use. The said key may, however, be made in any other convenient form.  $b^5$  is a stop adapted to engage with a shoulder in the breech end of the barrel to facilitate the introduction of the cham- 25 ber into its place in the barrel.

What I claim is—

The combination, with a gun-barrel, of a false chamber or bushing provided with an intermittent or divided screw and with notches 30 and recesses for the reception of a key, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two subscribing

witnesses.

## ROBERT HENRY ARMIT.

Witnesses: DAVID YOUNG, WALTER MORRIS.