V. V. DIBOVSKY.

MACHINE GUN.

APPLICATION FILED APR. 10, 1918.

1,298,911.

Patented Apr. 1, 1919.

Fig. 1.

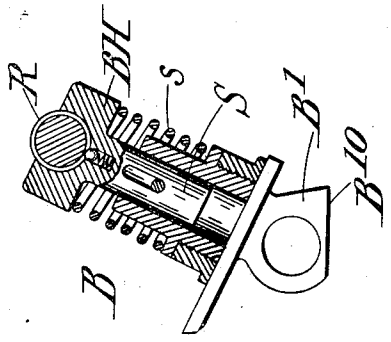
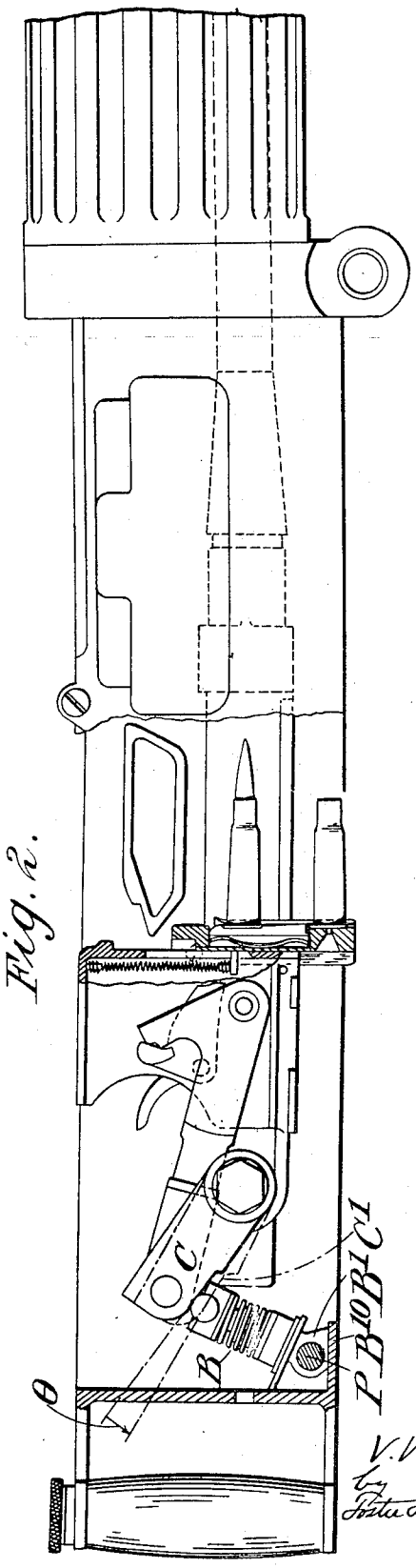


Fig. 2.



Inventor:
V. V. Dibovsky
by Foster Freeman Watson & Coit
Attys

UNITED STATES PATENT OFFICE.

VICTOR V. DIBOVSKY, OF KINGSWAY, LONDON, ENGLAND.

MACHINE-GUN.

1,298,911. Specification of Letters Patent. Patented Apr. 1, 1919.

Application filed April 10, 1918. Serial No. 227,774.

To all whom it may concern:

Be it known that I, VICTOR VLADIMIROVITCH DIBOVSKY, a Russian subject, captain of the Russian naval general staff, and whose post-office address is Canada House, Kingsway, London, England, have invented certain new and useful Improvements in Machine-Guns, of which the following is a specification.

This invention relates to machine-guns.

The rate of fire of an automatic gun can be increased by increasing the rate of reciprocation of the breech-block and other parts coöperating therewith. If the said rate of reciprocation is increased, disadvantages arise because the degree of shock imposed on the gun-mechanism is increased as well as its liability to jam. It is to a buffering device for use in the mechanism of a high-speed machine-gun, to counteract these disadvantages, that the present invention relates; the improvements thereunder are applicable to guns that are at present in use without necessitating alteration in the existing parts thereof, as well as to guns modified in design to incorporate the improvements.

The principal feature of the present invention is that in an automatic gun of the kind that has its main crank between the sides of the gun-casing a construction of spring buffer is employed, which comprises a base and a sliding head (with or without a hard cylindric projection or roller in the head) movable in relation to the base, and which intercepts the main crank near that end of its path toward which it is impelled by the recoiling lock, and has its axis inclined so that it shall be more or less normal to the face of the crank-webs which it is intended should strike against it; for the device is intended to cushion resiliently the companion webs of the crank and the parts operatively connected to the crank-pin, so that they will be cushioned by it in such a way that the shock they receive during the finish of their recoil will be reduced and their return movement will be accelerated.

The invention is hereinafter described in its application to a Vickers gun of a type already well-known and firing small-arm ammunition.

In the accompanying drawings—

Figure 1 is an elevation of a spring-buffer, partly in section, that is employed to operate upon the crank according to the present invention; and

Fig. 2 is a vertical elevation, partly in section, of the rear end of the casing of the gun with the spring-buffer of Fig. 1 in place in it.

Like reference-letters and numerals indicate like parts throughout the figures.

With reference to the drawings, the crank C and the buffer B are shown in Fig. 2 with the crank near the end of its path of recoil, the position of the lower side of the crank-web at the end of the path of recoil being indicated by the chain-lines C^1, and the angular extent of the portion of the path of the crank during which the buffer is operative upon it, being indicated by the arrow θ. The buffer-base B^1 is secured in the casing by a pin P which in the Vickers gun extends across inside the rear end of the casing and is employed for other purposes but comprises an unemployed intermediate portion which can pass through the buffer-base as shown.

The bottom of the buffer-base is provided with a flat as at B^{10} to rest upon the contiguous face of the gun-casing. When it thus rests, it will present the axis of the buffer at a convenient angle, as shown in Fig. 2 so that it may be more or less normal to the face of the crank-webs which strikes against it. The buffer-head B H has in it a hard cylindric projection or roller R against which the crank-webs actually abut. The head has a stem S which slides in a bore in the base and between the head and the base a stout spring *s* is maintained in compression.

It will be seen that the improved buffer is of very compact and simple construction and that it is arranged in the direct line of recoil movement of the barrel. The improved buffer is positioned inside of the gun casing, no part thereof protruding, and as before noted is supported by a part (the through rod or bolt P) which is employed in the standard Vickers gun. As no other parts are interposed between the buffer and crank C the latter makes direct contact with the spring supported head and the final rearward movement thereof is effectually checked without jar and its return movement accelerated.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In an automatic machine gun of the Vickers type, the combination with the crank adapted to be rocked at each recoil movement of the barrel, of a buffer, comprising a coiled

spring arranged inside of the casing in rear of the crank, said buffer being supported on the casing at its lower end and extending in an upwardly and forwardly inclined direction, in the line of recoil movement of the gun barrel, to be directly struck by the crank during the last movements of the recoil movement thereof to check such movement and accelerate return movement thereof.

2. In an automatic machine gun of the Vickers type, the combination with the crank adapted to be rocked at each recoil movement of the barrel, of a buffer, arranged entirely within the casing in rear of and below the crank and comprising a base secured to the gun casing and having a body extending in an upwardly and forwardly inclined direction toward the crank, a member telescopically connected with and extending beyond said body to be directly struck by the crank during the last portion of recoil movement thereof, a coiled spring acting to separate said members and to check recoil movement of the crank and accelerate return movement thereof, and means for limiting outward movement of the crank engaging member under the influence of the spring.

3. In an automatic machine gun, the combination with the casing and crank mounted therein, of a buffer device comprising a base secured to the gun casing, a coil spring mounted on said base, a head supported by said spring, and a roller mounted in the outer face of said head and adapted to be struck by the crank during its recoil movement, whereby the recoil will be checked and the return of the crank to firing position accelerated.

In testimony whereof I affix my signature.

V. V. DIBOVSKY.