De W. C. FARRINGTON.
Carriage for Machine-Guns.

No. 205,179. Patented June 25, 1878.

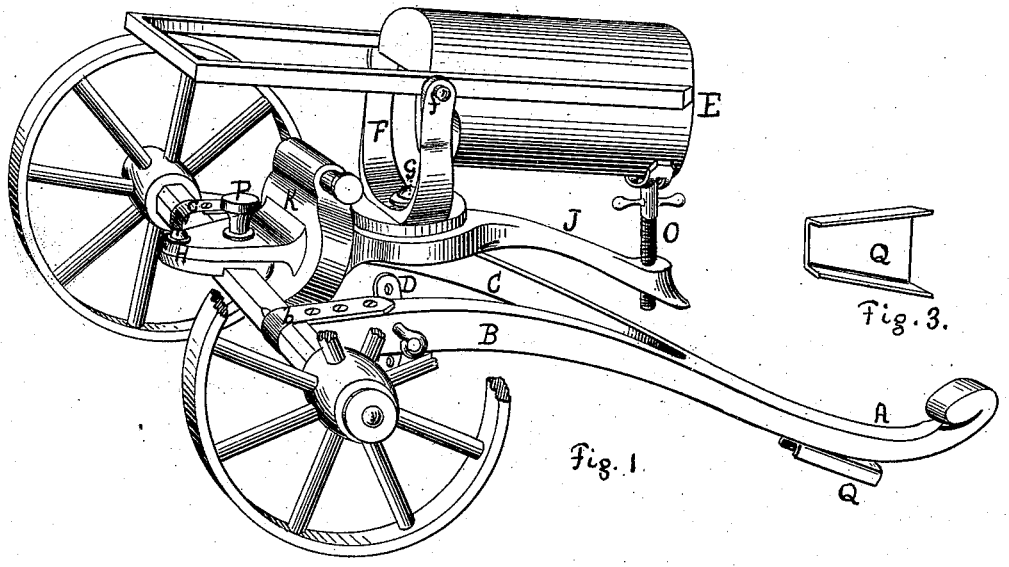

Fig. 1.

Fig. 3.

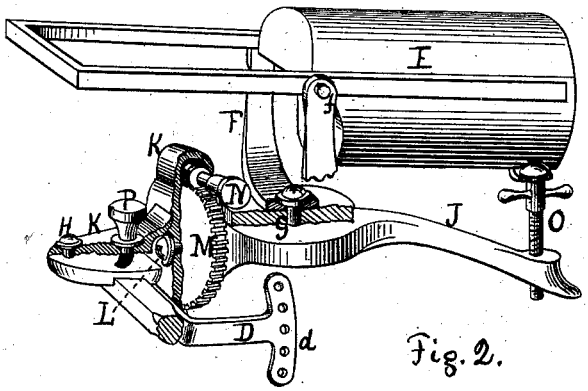

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

DE WITT C. FARRINGTON, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN CARRIAGES FOR MACHINE-GUNS.

Specification forming part of Letters Patent No. **205,179**, dated June 25, 1878; application filed October 16, 1877.

To all whom it may concern:

Be it known that I, DE WITT C. FARRINGTON, of Lowell, in the State of Massachusetts, have invented a new and useful Improvement in Machine-Guns and Gun-Carriages, of which the following is a specification:

The main object of the present invention is to adapt the mitrailleuse, or "machine-gun," so called, to more efficient service upon broken or uneven ground. To this end, as will be readily understood, means should be provided for elevating or depressing the barrels through the greatest range, and the gun should also be capable of traversing in a horizontal or any other desired plane, whatever may be the surface of the ground on which it stands.

The invention consists in devices, as hereinafter described, for accomplishing these desirable results, and in an improved trail-plate or anchor for limiting the recoil of the gun.

In the accompanying drawings, which illustrate the invention, Figure 1 is a perspective of the gun mounted on its carriage. Fig. 2 is a detail view, showing more particularly the mechanism for leveling the piece; and Fig. 3 is a view of the trail-plate or anchor inverted.

Referring to the drawing, A is the stock of the carriage; B and C, the two cheeks, attached to the axle by means of the straps *b* and *c*, which encircle the rounded parts of the axle in such way as to permit the latter to turn freely in them. Firmly bolted to the axle are two sword-plates, D D, one only of which is shown in the drawings, and the part *d* of each of these is provided with a series of holes for receiving the end of a pin or key passing through the corresponding cheek-piece. By means of these plates and keys the stock and the axle can be locked together as required.

The gun E is supported upon its trunnions *f f* in the vertical frame F, and this frame F is pivoted at G to a horizontal frame, which, in turn, is pivoted, at H, to a seat upon the axle. This horizontal frame is made in two parts, J and K, one of which—being the part which more immediately supports the gun—is so shaped at its forward end as to turn freely within a socket formed in the other.

L is the bolt which secures the two parts together, and the revolution of the part J within its socket is regulated by means of the cogs and screw-bolt M and N. O is the elevating-screw, and P is a set-screw for locking the frame J K upon the axle.

The operation of the parts will readily be understood.

By the use of the sword-plates D D, in combination with the elevating-screw O, a greater range can be obtained in elevating and depressing the gun than would be possible with the screw alone; and this is specially desirable in the machine-gun, which, by reason of its extreme portability, requires a capacity in this respect that would be useless in a heavier piece.

It is plain that instead of the perforated sword D and its detaining pin or key any other device capable of accomplishing the same result, as a pawl and ratchet, may be substituted at the will of the constructor.

The pivot H is the center on which the gun is caused to move in changing its general line of fire, while G is the pivot around which the automatic traverse takes place.

The special mechanism by means of which the traverse may be effected is not shown, as that forms the subject of other patents.

It is manifest that if a gun is made to traverse laterally while in operation the barrels should reciprocate in a plane having the same lateral inclination, if any, as the line of objects at which the fire is directed, which may be widely different from the plane of the ground upon which the gun immediately stands. By means of the pivot L and the adjusting mechanism M and N this desirable result can readily be attained, since the pivot L constitutes an axis of motion at right angles to the pivot on which the gun traverses; and by means of the cogs and screw-bolt M and N the gun can be adjusted at any desired point in its arc of motion around this axis.

It is plain that for the cogs and screw-bolt M and N (shown in the drawing) various other devices capable of accomplishing the same result may be substituted without in any way departing from the principle of the invention, the main point being to secure for the adjustment required an axis of motion at right angles to the pivot around which the gun traverses.

Q is the trail-plate or anchor. This device,

as usually made, consists of a plate bolted to the under side of the stock trail, and having its two side edges turned down into two parallel flanges. The present improvement consists of a plate in which these flanges are made converging toward the front. It results from this construction that as the gun is driven back by the recoil, the earth or sod is compacted and wedged in between the converging sides of this plate, and thus becomes far more effectual to resist the recoil.

So far as concerns the improved elevating and depressing mechanism above described, as also the mechanism for regulating the fire according to the lateral slope of the ground, it will be readily understood that it may be used in connection with a gun mounted upon a tripod as well as one mounted on a wheel-carriage.

What is claimed as new is—

1. The combination, in a machine-gun, of an elevating-screw, a sword-plate, D, or equivalent device, and an intermediate frame, supporting the gun proper and the screw, substantially as and for the purpose described.

2. The combination, in a machine-gun, of a traverse-pivot, G, and an axis of motion at right angles thereto, for regulating the plane of the traverse, substantially as described.

3. A trail-plate or anchor constructed with converging flanges, substantially as and for the purpose described.

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