N. L. MILBURN.

Revolving Ordnance

No. 57,751. Patented Sept. 4, 1866.

Fig. 1.

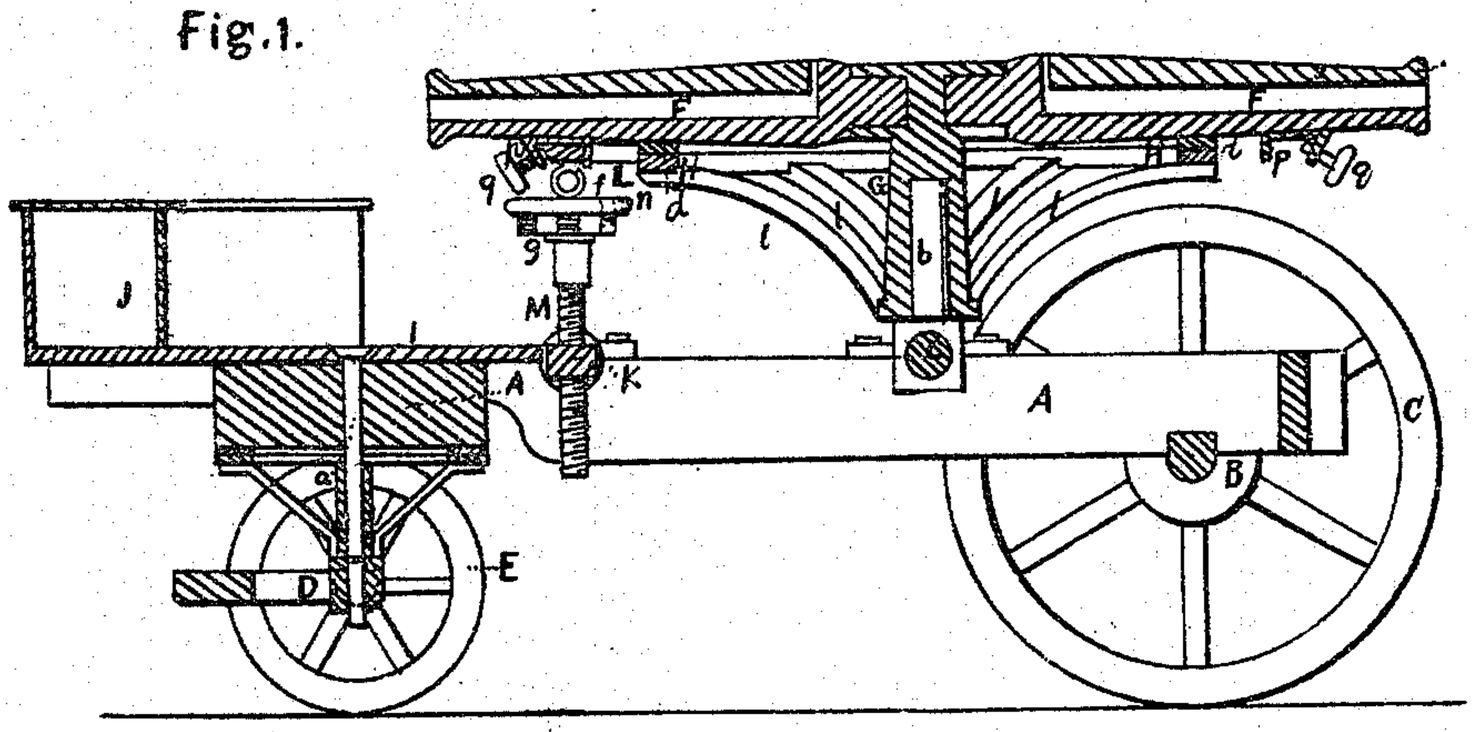


Fig. 3

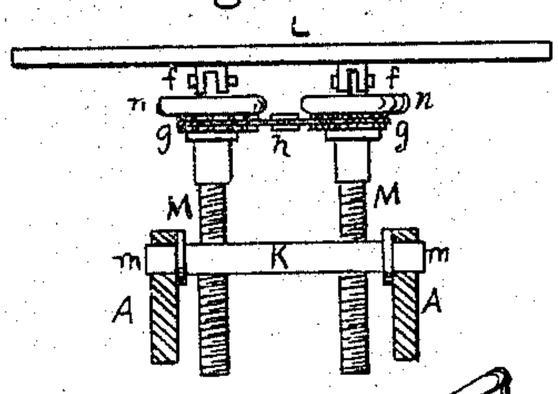


Fig. 4

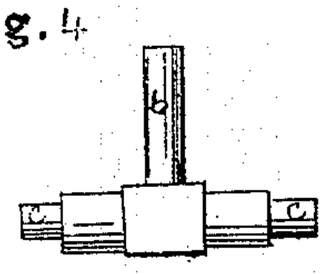
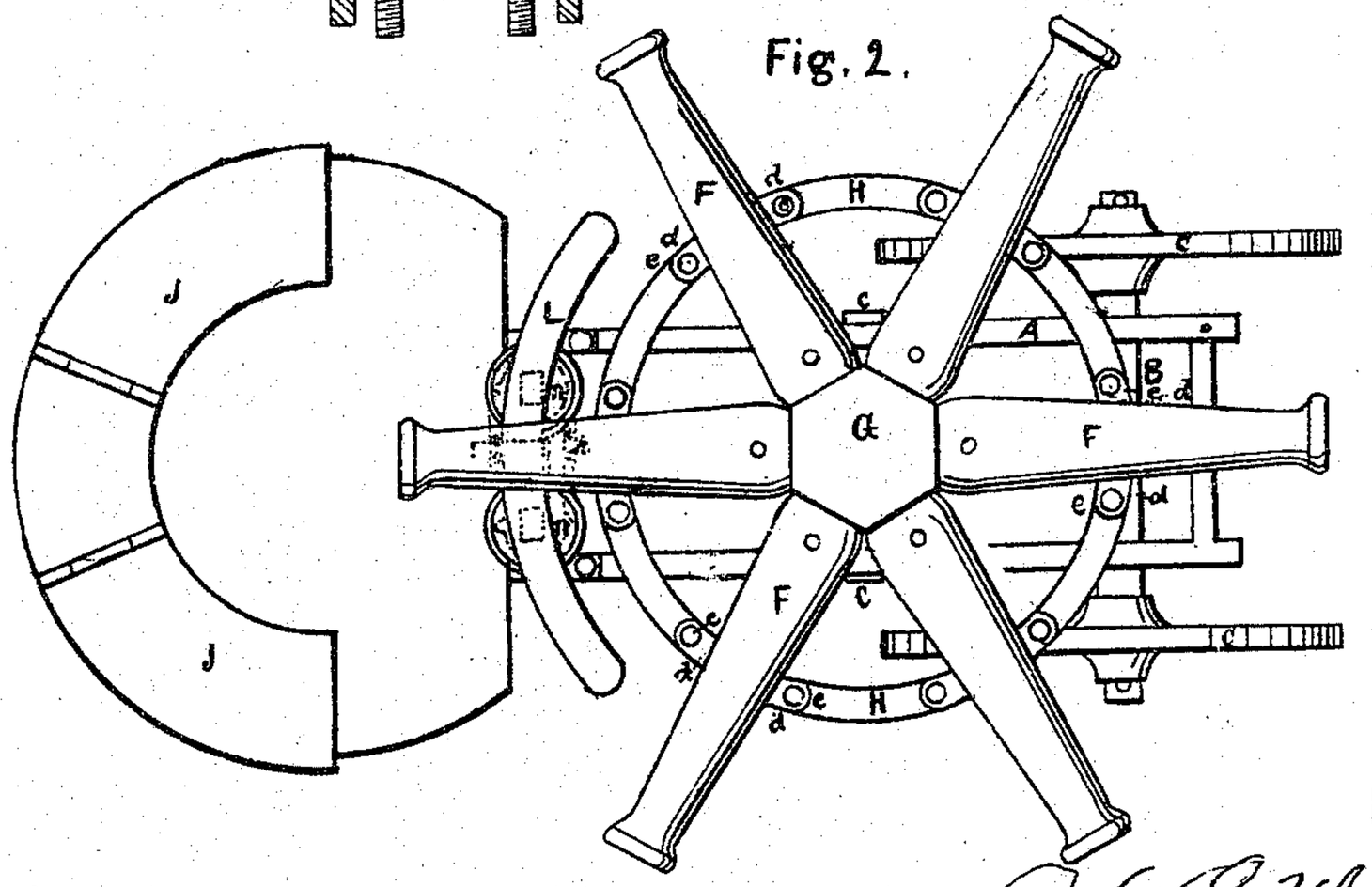


Fig. 2.



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UNITED STATES PATENT OFFICE.

NATHAN L. MILBURN, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN REVOLVING ORDNANCE.

Specification forming part of Letters Patent No. **57,751**, dated September 4, 1866.

To all whom it may concern:

Be it known that I, NATHAN L. MILBURN, of the city and county of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Repeating-Ordnance; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a central vertical section of a field-piece constructed according to my invention; Fig. 2, a plan of the same; Fig. 3, a front view of the elevating mechanism, and Fig. 4 a front view of the central pin.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to ordnance having several barrels radiating in the same plane from a common axis occupying a vertical position, or only deviating from such position so far as is necessary for the elevation of the barrels. It consists in an improved mode of supporting such series of barrels upon the carriage, which provides for their revolution to admit of their being fired successively, and also of their being elevated to any desirable degree; also, in certain means of providing for the elevation of the several barrels and securing them in any positions in a circle round the axis from which they radiate.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

A is the carriage, having attached to it a fixed axle, B, fitted with two large wheels, C C, and a guide-axle, D, turning on a king-bolt, *a*, and fitted with two smaller wheels, E E. On that end of the carriage over the smaller wheels there is secured the gunners' platform I, of nearly circular form, having upon it ammunition-boxes J J.

F F are the barrels, attached rigidly to a central perpendicular socket, G, which is bored to fit and turn upon the pin *b*, which forms part of the inverted T-shaped bolt shown in Figs. 1 and 4.

The arms *c c* of the bottom of this bolt constitute trunnions, which are fitted to bearings on opposite sides of the carriage A.

The barrels are further supported upon a concentric ring, H, connected by rigid arms *l l* with the socket G, each barrel being furnished with two lugs, *d d*, through which it is bolted or riveted to the said ring by bolts or rivets *e e*.

M M are two elevating-screws arranged side by side, both screwing through tapped holes in a rocking bar, K, which is made with journals *m m* at its ends, and arranged parallel with the trunnions *c c* in bearings on the carriage A. The heads *n n* of these screws are fitted with swivels *f f*, which are connected by pin-joints with a curved bar, L, which is concentric with the axis of the pin *b*, and the said screws are geared together by two sprocket-wheels, *g g*, of equal size, and an endless chain, *h*, so that when one is turned the other will be caused to turn in the same direction, that both may operate together to raise or lower the said bar L. The said bar is made with its outer edge of beveled or half dovetail form, as shown in the section Fig. 1, and each one of the barrels F F has attached to its under side a screw-clamp, *p q*, to fit the said bar, which is of such length that, in the revolution of the barrels with the central socket G, one screw-clamp will always be upon the said bar and not leave it till another arrives upon it.

The operation of the gun is as follows: The barrels are loaded by the gunner or gunners on the platform I, each being in turn brought to a suitable position by turning the whole series either by hand or by suitable mechanism, and each is fired on its arrival over the space between the wheels C C, being sighted by a gunner on the platform, and being secured in position by screwing up the screw *q* of the clamp *p q*, which is upon the bar I.

The proper elevation is obtained by turning one of the screws M M, the said screws operating together to raise or lower the bar I, as before described, and the center-bolt *b c c* swinging on its trunnions *c c*, and the bar K oscillating in its bearings to permit the adjustment.

When the proper elevation has been obtained by one barrel, the elevation of the others will be correct on their arrival in position for firing.

This gun has many advantages, among which

the most prominent are the following: first, the facility afforded for loading; second, the provision made for rapidly-repeated firing without overheating; third, the facility for sighting without moving the carriage; fourth, the economy of labor in working it.

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

1. The arrangement of the radiating series of barrels to revolve upon a central pin, *b*, furnished with trunnions *c c*, and applied to operate substantially as herein specified.

2. The combination of the curved bar L, the screws M M, the rock-shaft K, and the clamps *p q*, the whole applied, in combination with the barrels and carriage, to operate substantially as herein set forth.

NATHAN L. MILBURN.

Witnesses:
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