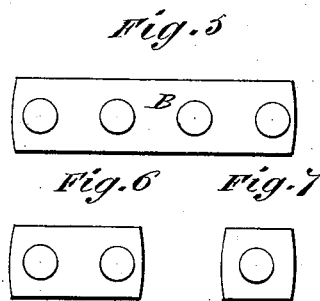
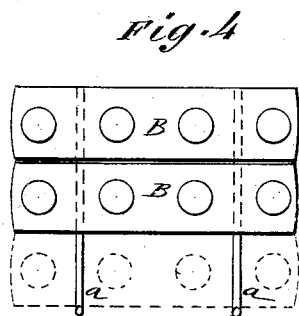
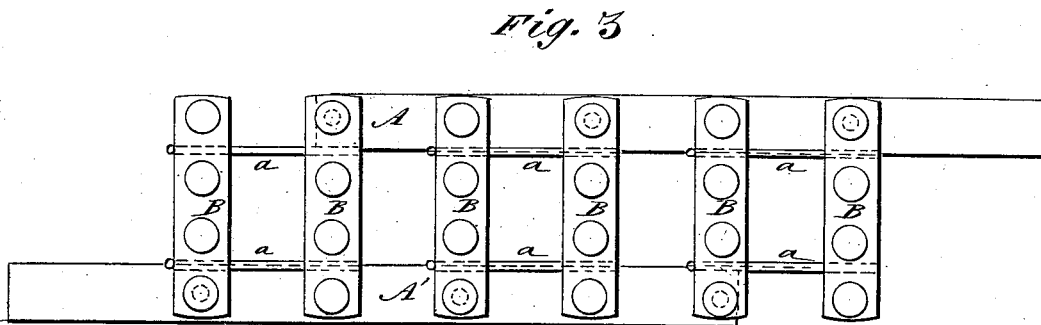
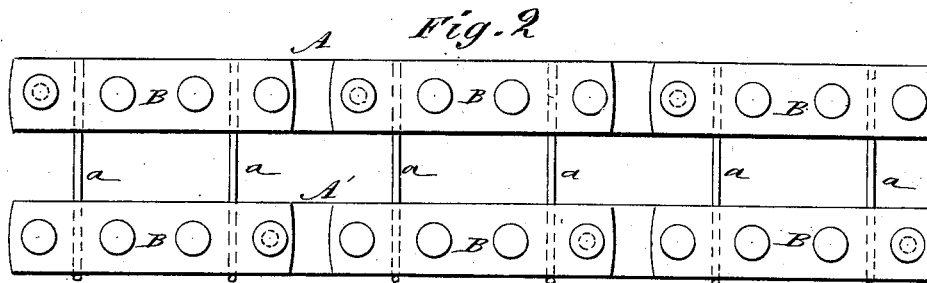
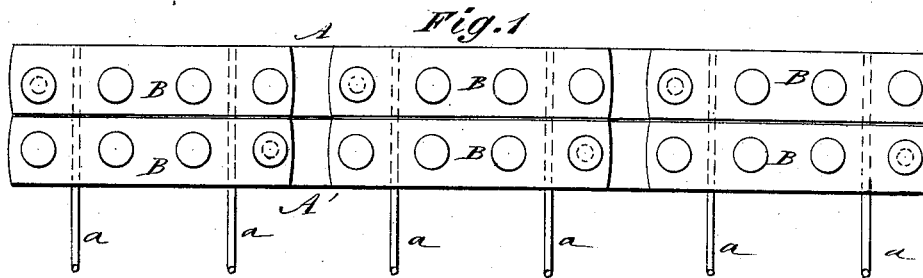


W. H. BROWNELL.
 Apparatus for Demonstrating Military Tactics.

No. 206,420.

Patented July 30, 1878.



WITNESSES:

C. Neveux
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UNITED STATES PATENT OFFICE.

WILLIAM H. BROWNELL, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN APPARATUS FOR DEMONSTRATING MILITARY TACTICS.

Specification forming part of Letters Patent No. **206,420**, dated July 30, 1878; application filed May 24, 1878.

To all whom it may concern:

Be it known that I, WILLIAM H. BROWNELL, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Apparatus for Demonstrating Military Tactics, of which the following is a specification:

Figures 1, 2, and 3 are plan views of the apparatus, showing in each figure a company. Fig. 4 represents two subdivisions of fours. Fig. 5 represents a single subdivision of fours. Fig. 6 represents two men; Fig. 7, an officer.

The object of my invention is to provide a device for illustrating the principles of military tactics, and especially for the demonstration of Upton's tactics.

The invention consists in two bars, to each of which are pivoted a series of short bars, having four pins each, for receiving figures representing the men of the company. The short bars are arranged in pairs, which are connected by rods, that are fastened in one of the bars and slide through the others.

Referring to the drawing, A A' are bars, to each of which are pivoted three bars, B. The pivots of the short bars B which are connected with the bar A are diagonally opposite the pivots of the bars connected with the bar A', and each pair of short bars B are connected by two rods, *a*, which are fixed in one of the bars, and are capable of sliding through the other.

The various movements of company and battalion can be clearly illustrated by the device. To open ranks, the bars A A' are simply drawn apart as far as the rods *a* will permit. To close ranks, the reverse movement is made. To form column of fours, the bars A A' are moved so as to turn the bars B on their pivots until they are at right angles with the bars A A'. The bars B are then drawn apart to secure the proper distance between the fours. This distance is limited by the length of the rods *a*.

In Upton's tactics four men are treated as a unit, and in my apparatus the same arrangement is observed.

Besides the arrangement of the company on the bars A A', the bars B may be connected in pairs by the rods *a* and employed without the bars A A'; and single bars B may also be used to represent a unit, or, what is known as the same thing, four men.

With this device the following movements in the school of the company may be demonstrated: To form company; to open and close ranks; alignment; to march in line; wheel from a halt; change direction, marching in line; to march by flank, column of fours; to form column of fours and halt; fours in a circle; to march in column of fours to front; and it will show every combination of fours in the school of the company.

By employing two or more companies, the principle of battalion movement can be clearly demonstrated.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An apparatus for demonstrating military tactics, consisting, essentially, of a pair of parallel main bars, having short bars carrying miniature figures of soldiers pivoted to said main bars, arranged and adapted to operate as and for the purpose set forth.

2. A series of pairs of short parallel bars, carrying figures representing men, and the guide-rods and long main bars, in combination, arranged and adapted to operate substantially as herein shown and described.

3. A bar carrying figures representing soldiers and provided with fixed horizontal rods, in combination with a second bar having perforations and adapted to slide on said rods, arranged and adapted to operate as and for the purpose set forth.

WILLIAM H. BROWNELL.

Witnesses:

GEO. M. HOPKINS,
C. SEDGWICK.