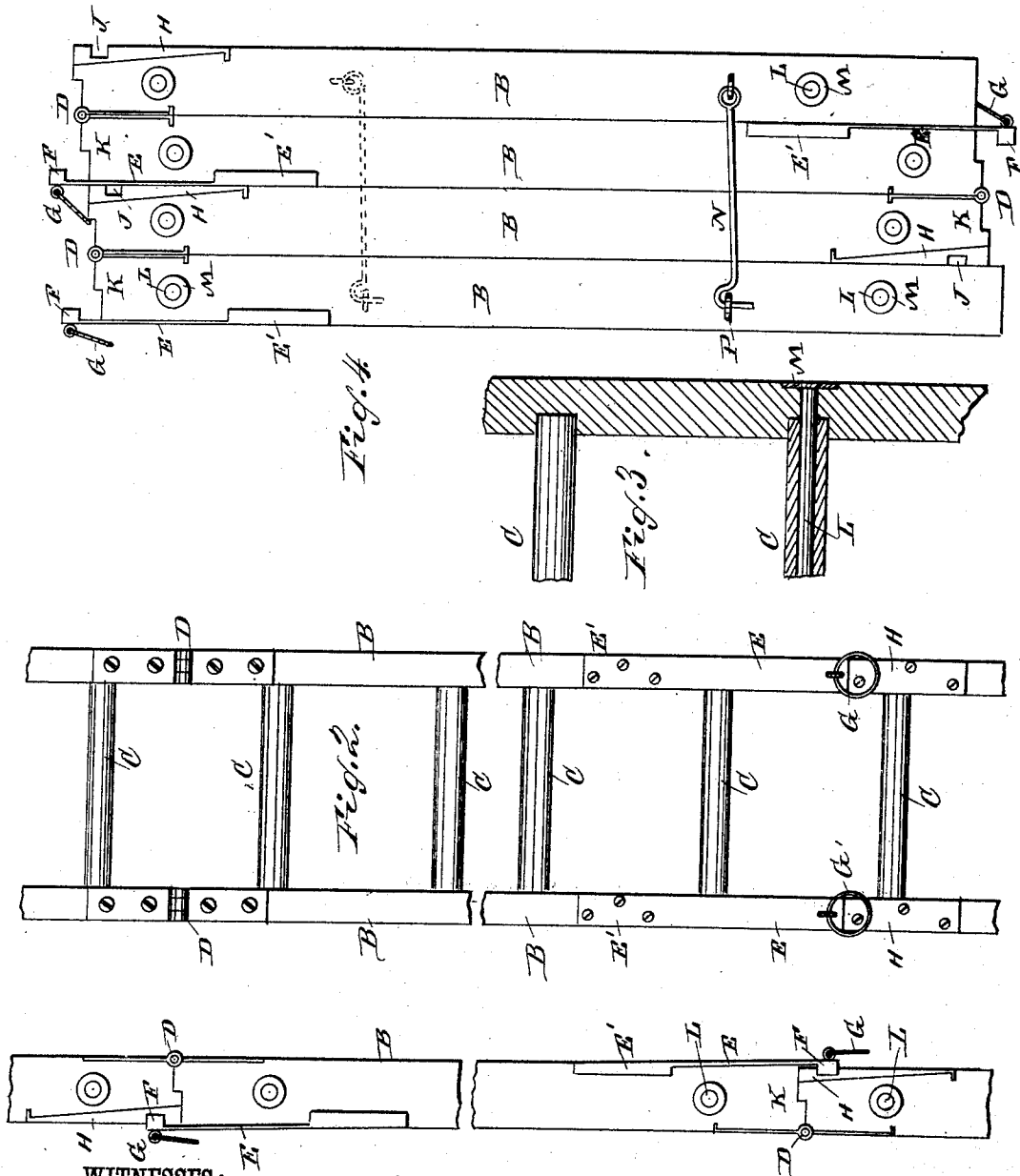


(No Model.)

J. READY.
FOLDING LADDER.

No. 320,692.

Patented June 23, 1885.



WITNESSES:

Geo. G. Norton
C. Sedgwick

Fig. 1.

INVENTOR:

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UNITED STATES PATENT OFFICE.

JOHN READY, OF LITTLETON, NEW HAMPSHIRE.

FOLDING LADDER.

SPECIFICATION forming part of Letters Patent No. 320,692, dated June 23, 1885.

Application filed March 20, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN READY, of Littleton, county of Grafton, New Hampshire, have invented a new and Improved Folding Ladder, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved folding ladder, which can be folded very compactly, can be erected very easily and rapidly, can be adjusted for uses, and is stiff and rigid when erected.

The invention consists in the combination, with hinged ladder-sections, of spring-catches and notched blocks for holding the sections in line.

The invention also consists in parts and details, and combinations of the same, as will be fully set forth hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved folding ladder erected, parts being broken out. Fig. 2 is a front view of the same, parts being broken out. Fig. 3 is a detail sectional view of parts of the ladder. Fig. 4 is a side view of the ladder folded.

The ladder is formed of a series of sections, preferably four, each consisting of two side bars, B, united by rungs C. The sections are hinged together by hinges D, secured on the ends of the bars B, alternately on the front and back edges. On opposite edges of the bars B, and at opposite ends, the spring-catches E are secured, the free ends of which project beyond the ends of the bars B, and have heads F on their ends, and also rings G for pulling the free ends of the springs. The fixed ends E' of the springs E are thickened, and sunk into the edges of the bars B. In the edges of the bars B, opposite the ones on which the springs E are fastened, blocks H are secured, which are provided with notches or recesses J, for receiving the heads F of the springs E. When the ladder is erected, the springs or catches E will alternately appear on the front and back edges of the bars B, as shown in Fig. 1. The ends of the bars B are provided with the shoulders or offsets K, so as to lock together snugly. Through each end rung of each section a rod, L, is passed, which is held in place by rings M placed on the ends, countersunk in the outer sides of the side bars, B, and secured by riveting. Hooks

N and staples P are secured on the side bars of the top and bottom sections to hold the sections together when folded, as shown in Fig. 3. To erect the ladder, the sections are swung from each other, so that the ends of bars B abut and the heads F of the springs E snap into the recesses J in the blocks H, and thus lock the sections in place. To fold the ladder, the sections must be disengaged by pulling the outer ends of the springs E out of the recesses J by means of the handle-rings G.

The ladder can be used as a fire-escape, for painting houses, picking fruit, &c, or can be erected in the shape of a letter M to support scaffolding, the middle parts of the ladder resting on a shoe to protect the ends of the springs, &c.

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

1. In a ladder-section, the combination, with the side bars, B, of the rungs C, the rods L, and the rings M, at the ends of the said rods and in the side pieces, substantially as herein shown and described.

2. In a ladder, the combination, with ladder-sections hinged together, of the springs E, secured to the side bars of one section and having heads F, and of the blocks H, secured on the side bars of the adjacent section and having recesses J for receiving the heads on the spring, substantially as herein shown and described.

3. In a folding ladder, the combination, with ladder-sections hinged together and having shoulders K formed on the ends, of the springs E, secured on the side bars of one section and having heads F, and of the block H, secured in the side bars of another section and having recesses J, substantially as herein shown and described.

4. In a folding ladder, the combination, with a ladder-section, of the springs E, having the thickened ends E', and the heads F, substantially as herein shown and described.

5. In a folding ladder, the combination, with hinged ladder-sections, of the springs E, having heads F, the rings G, and the blocks H, having recesses J, substantially as herein shown and described.

JOHN READY.

Witnesses:

FRED CHENEY,
A. J. BARRETT.