M. B. Geary.

Step Ladder.

No. 112,442. Patented Mar. 7, 1871.

Fig. 1.

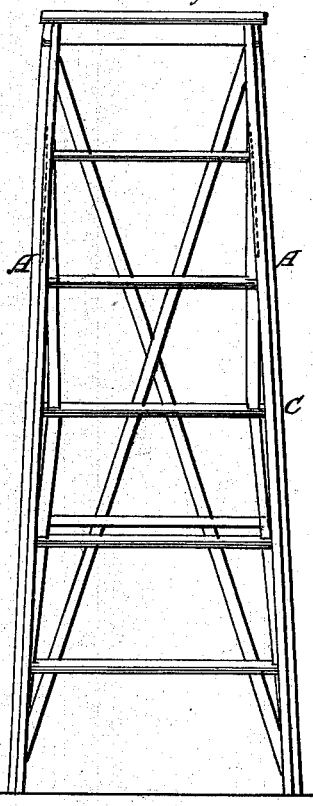


Fig. 2.

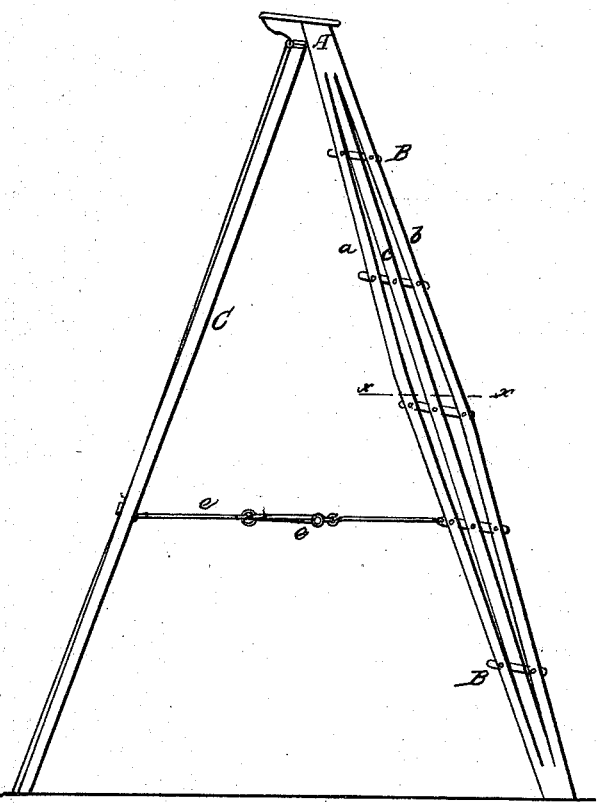
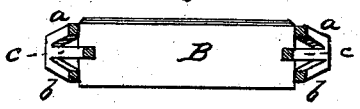


Fig. 3.



Witnesses:

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Letters Patent No. 112,442, dated March 7, 1871.

IMPROVEMENT IN STEP-LADDERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, M. BOLAND GEARY, of the city, county, and State of New York, have invented a new and useful Improvement in Step-Ladders; and I do hereby declare that the following is a full, clear and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

This invention consists in a novel construction of the side pieces which support the steps of the ladder, said pieces being longitudinally slit so as to be divided into three parts, for the greater portion of their length, and the so divided parts being sprung apart and aside, in arched form, to produce a compound truss, whereby the side piece is braced in a forward, a rearward, and a transverse direction.

In the accompanying drawing—

Figure 1 is a front view of a step-ladder constructed according to my invention;

Figure 2 is a side view of the same; and

Figure 3 is a transverse section of the side pieces and steps taken at the line *x x* in fig. 2.

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

A A are the side pieces, each of which is made of a single piece of board entire at its end portions; but it has two parallel slits cut throughout the greater portion of its length, which divide such portion into three pieces or strips, the outer two of which are bent, the one, *a*, backward, and the other, *b*, forward, and the center-piece *c* is bent sidewise, in a direction at right angles to that in which the others are bent, so that the three form a compound truss.

The steps B are secured to the side pieces by fitting their ends into grooves in the outer strips *a b*, and by fitting a recess, provided in the center of the end of the steps, to the center-piece *c*, and securing them in place by nails or screws. The steps are thus made to brace the arches of the truss and keep them in shape.

The ladder is provided, as usual, with a prop, C, hinged at its upper end to the upper portion of the ladder, and secured from swinging too far therefrom by two chains, *e e*, which are connected to opposite sides of the ladder and prop, so that they cross each other midway between them.

The advantages gained by this construction of a step-ladder are that its sides are braced not only in a forward and backward direction, but laterally; that the steps are firmly secured to the side pieces; and that greater strength and durability are obtained with less weight of material than by any other construction, while the ladder can be at less expense than other trussed ladders.

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

The side pieces A A of the step-ladder, slit for the greater part of their length to form three strips, *a b c*, the outer ones, *a b*, being bent outwardly, and the inner one, *c*, laterally thereto, forming a triangular or compound truss, substantially as shown and described.

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