J. J. BRADY.

Step-Ladder.

No. 204,191. Patented May 28, 1878.

Fig. 1

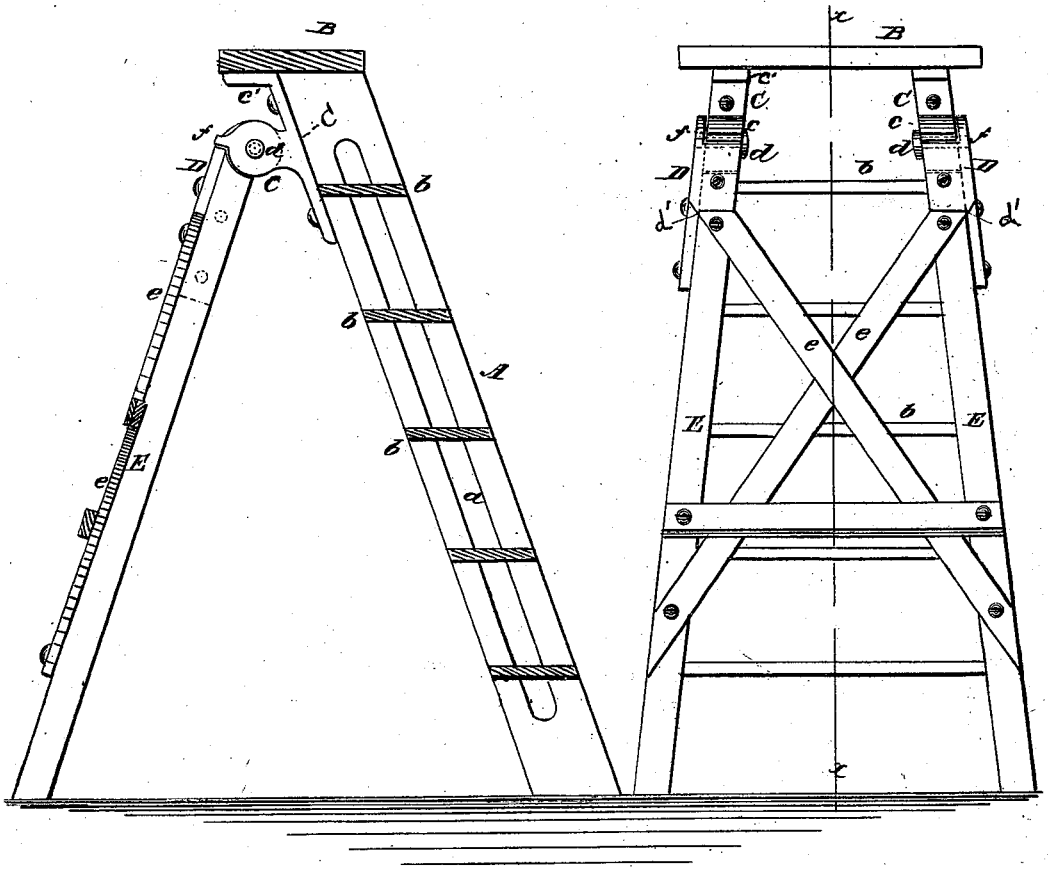
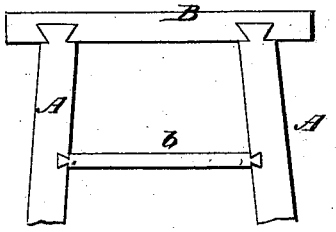


Fig. 2.

Fig. 3.



WITNESSES:

Francis M. Dodge.

C. Sedgwick

INVENTOR:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN J. BRADY, OF LONG ISLAND CITY, NEW YORK.

IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **204,191**, dated May 28, 1878; application filed December 27, 1877.

To all whom it may concern:

Be it known that I, JOHN J. BRADY, of Long Island City, county of Queens, and State of New York, have invented a new and Improved Step-Ladder, of which the following is a specification:

Figure 1 is a vertical section of my improved step-ladder, taken on line *x x* in Fig. 2. Fig. 2 is a rear elevation. Fig. 3 is a detail front view, showing the manner of connecting the steps and side piece.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with drawing, and then pointed out in the claim.

Referring to the drawing, A A are the side pieces of the step-ladder, in each of which there is a slot, *a*, running nearly the whole length, to render it lighter. The upper ends of these side pieces are fitted to dovetail grooves in the upper portion, and steps *b b*, &c., are fitted to dovetail grooves in the side pieces. By means of this construction the steps and side pieces are firmly secured together without screws or nails.

The hinges which receive the braces each consist of an L-shaped bracket, C, which supports the rearwardly-projecting edge of the step B, and upon which there is an ear, *c*, which is perforated to receive the stud *d*, that projects from the right-angled plate D, which incloses the upper end of the ladder-supporting brace E on the side and back. The back portion of the right-angled plate D has a notch, *d'*, in its lower end, for receiving the upper end of the diagonal brace *e*, that is attached to both braces E. The upper end of the back portion of the plate D abuts against a shoulder, *f*, on the ear *c* when the ladder is set up in position for use.

By using this hinge the various sorts of stays that have heretofore been employed in preventing the rear braces from slipping backward may be dispensed with, as the hinge limits rearward movement of the braces.

In heavy ladders, where it is desirable to move only a part of the ladder at once, the rear braces may be disconnected from the ladder by springing apart the upper ends of the braces, so as to disengage the hinges.

I am aware that it is not new to make a mortised bracket to receive the side standards of the ladder and a hinge-arm pivoted to an ear, together with a stop; but

What I claim is—

The step-ladder hinge composed of the part C, (to be attached to the stile,) having the flange *c'*, for sustaining the top step, and the hinge-ear *c*, with stop *f*, and the part D, (to be attached to the legs,) having the stud *d* and angle-piece, provided with the notch *d'*, for holding the head of the brace *e*, all as shown and described.

JOHN J. BRADY.

Witnesses:

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