

(No Model.)

G. A. SOMMER.
FOLDING STEP LADDER.

No. 295,299.

Patented Mar. 18, 1884.

Fig. 2.

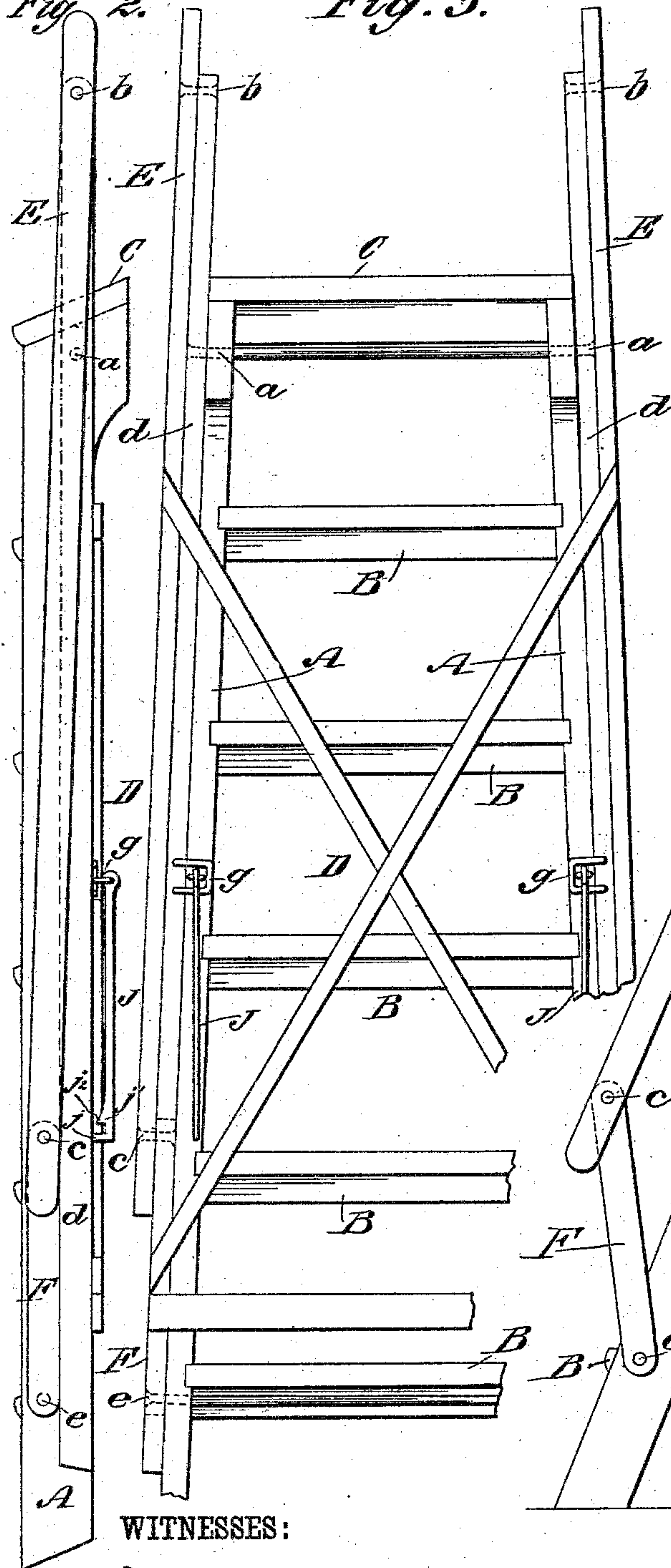


Fig. 3.

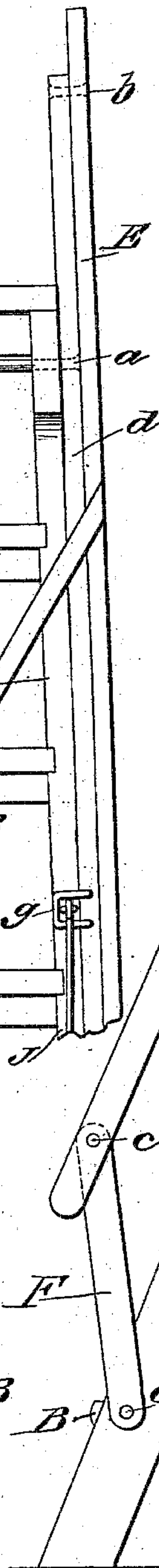
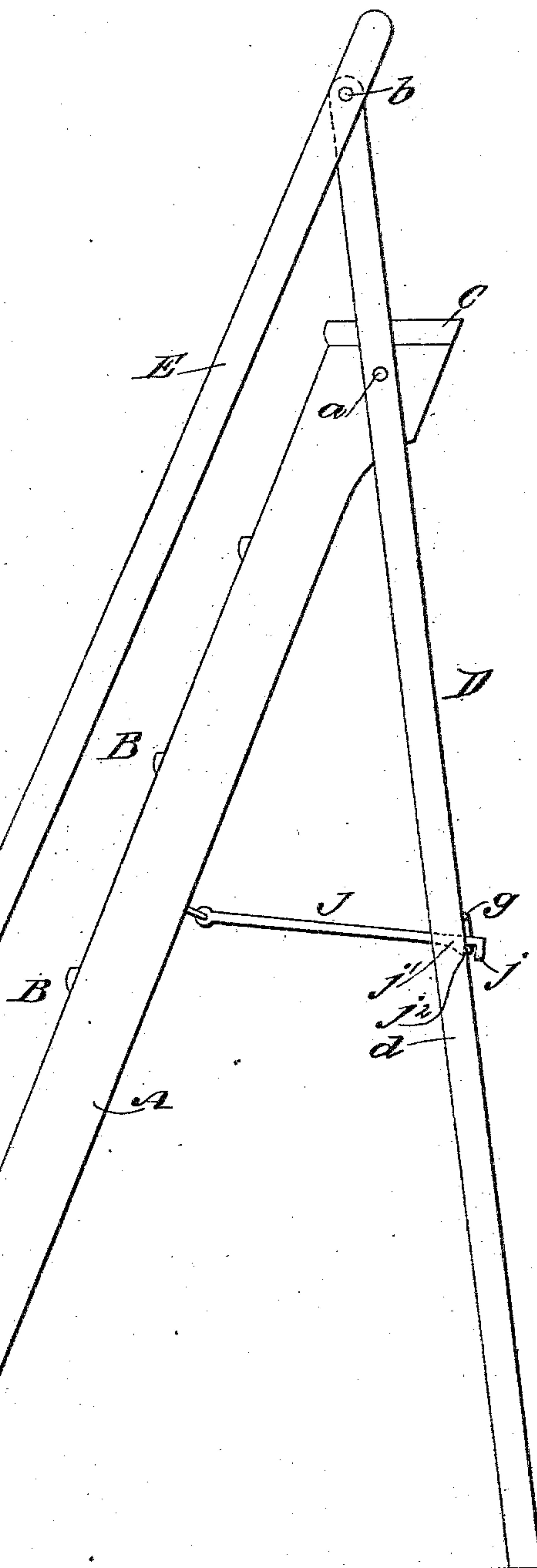


Fig. 1.



WITNESSES:

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FOLDING STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 295,299, dated March 18, 1884.

Application filed January 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. SOMMER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Folding Step-Ladder, of which the following is a full, clear, and exact description.

This invention relates to that class of step-ladders which have side rails or banisters to assist a person in ascending and descending the ladder; and the invention consists, principally, in arranging the side rails or banisters and standard of the ladder to act together in such manner that the opening and closing of the side bars will at the same time open and close the standard, and vice versa.

The invention also consists of the combination, with the standard and side bars arranged to act together in opening and closing, of automatically-operating brace-rods for holding the ladder in open condition for use.

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 elevation of my new and improved step-ladder as it appears when open for use. Fig. 2 is a similar view, showing the ladder closed; and Fig. 3 is a rear elevation of the ladder closed.

The side boards, A A, steps B B, and landing C of the ladder are of the usual construction, and the standard D is also of the usual construction, except that the bars *d d* thereof are pivoted to the side boards, A, near the landing C, upon the pivots *a a*, and the upper ends of the bars extend above the landing C, as shown in the drawings.

To the upper ends of the bars *d d* are pivoted by pivots *b b* the upper ends of the side rails or banisters, E E. The lower ends of the side rails, E E, are pivoted by pivots *c c* to the links F F, which are pivoted by pivots *e e* to the side boards, A A, near their lower ends, as shown clearly in Fig. 1, so that these links F F serve to fold the lower ends of the rails E E down to the sides of the side boards, A A, when the upper ends of the bars *d d* are drawn toward the side boards, A A, in closing the standard D against the back of the ladder. By drawing the standard D outward at

its lower ends the parts of the bars *d d* thereof reaching above the pivots *a a* will carry the upper ends of the side rails, E E, outward away from the front of the ladder, and the links F F will cause the lower ends of the rails to be carried out a like distance to the position shown in Fig. 1, where they serve to assist a person to ascend and descend the ladder; and to prevent the standard D from being swung outward too far in opening the ladder I provide the rear edges of the side boards, A A, with the notched braces or rods J J and the bars *d d* with the staples *g g*, through which the brace-rods J J pass, the outer hooks, *j*, being of greater length than the width of the staples *g g*, so that they serve as stops to limit the outward movement of the standard D, and the brace-rods J J are curved downward at their lower edges, as shown at *j'*, and notched to form the offsets *j''*, which offsets engage with the lower parts of the staples *g*, for holding the ladder in open position for use, and the curves *j'* of the braces, when the ladder is being opened, cause the staples to pass the offsets *j''*, permitting the offsets *j''* to drop of their own weight behind the lower bars of the staples *g*, thus causing the braces to automatically engage with the staples without any attention on the part of the person opening the ladder.

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

1. The bars *d d* of the standard D, pivoted to the side boards, A, of the ladder and reaching above the ladder, in combination with rails E and links F, pivoted to the side boards, A, and lower ends of the rails E, the rails E being pivoted to the upper ends of the bars *d d*, substantially as and for the purposes set forth.

2. The braces J, formed with the curved edges *j'* and offset *j''*, and hook *j*, in combination with the staples *g* and the simultaneously opening and closing standard and side rails, D E, substantially as and for the purposes set forth.

GEORGE ANTON SOMMER.

Witnesses:

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