

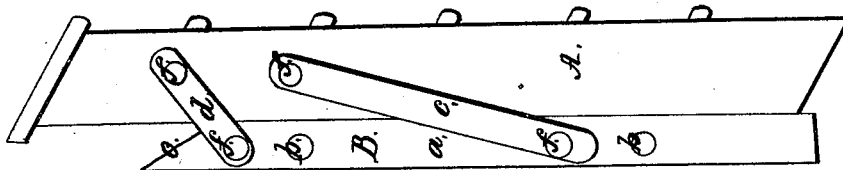
*A. F. Saunders,*

*Step Ladder.*

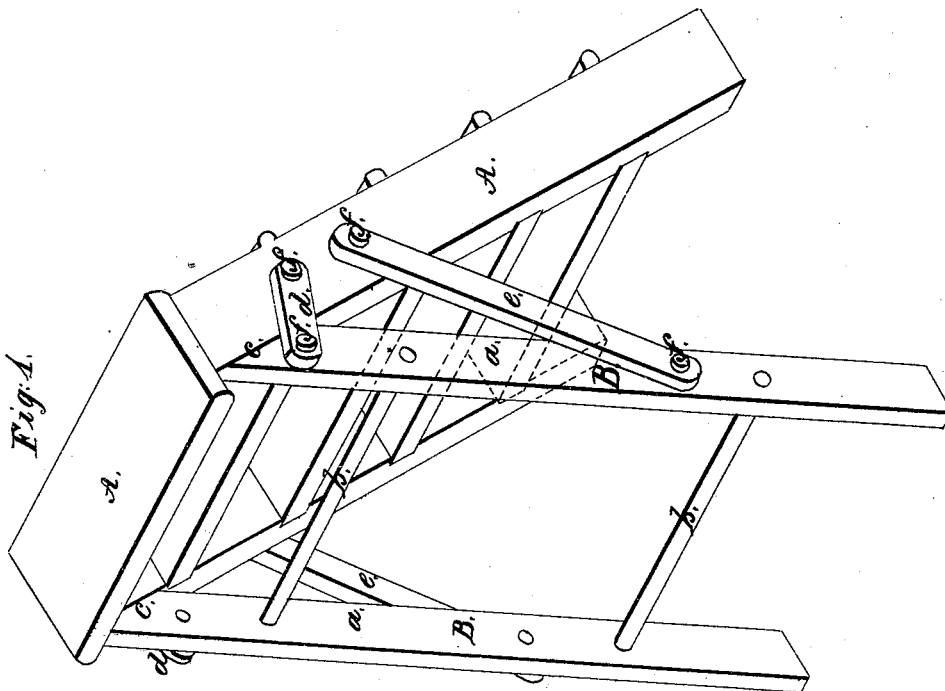
*No. 51,394.*

*Patented Dec. 5, 1865.*

*Fig. 2.*



*Fig. 4.*



*Witnesses:*

*P. C. Schumacher*  
*N. W. Stearns.*

*Inventor:*

*Abiel F. Saunders.*

# UNITED STATES PATENT OFFICE.

ABIEL F. SAUNDERS, OF BOSTON, ASSIGNOR TO EVERETT SMITH, OF BOSTON, AND BERNARD T. FELLOWS, OF MALDEN, MASSACHUSETTS.

## STEP-LADDER.

Specification forming part of Letters Patent No. 51,394, dated December 5, 1865.

*To all whom it may concern:*

Be it known that I, ABIEL F. SAUNDERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a Self-Adjusting Step-Ladder, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved step-ladder ready for use. Fig. 2 is a side elevation of the same folded up.

In step-ladders as heretofore constructed the support has been hinged or pivoted to the steps and held open by hooked rods, ropes, or slotted braces and pins, which are objectionable on account of their hanging loosely in the way when the steps are shut up after use.

My invention has for its object to avoid this difficulty and to produce a neat and simple self-adjusting step-ladder, which possesses great strength and can be furnished at a moderate cost; and it consists in attaching the support to the steps by means of side braces so arranged and pivoted that the whole can be compactly shut up and instantly opened ready for use at one operation.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the steps, and B the support, which is composed of two pieces, *a*, connected together in the ordinary manner by rods *b*. The upper ends of the pieces *a* are beveled at *c* to correspond to the

inclination of the steps A, as seen in Fig. 1, and the support is connected on each side to the steps by side braces, *d e*. These braces are secured in place by means of pins *f*, on which they pivot, and are so arranged as to allow of the ladder being folded up compactly, as seen in Fig. 2, and instantly opened ready for use at one operation, it being simply necessary to draw out the support from the steps without the necessity of hooking or fastening the braces in place; and it will be seen that when open ready for use the ladder is braced in both directions, so that the greater the weight put upon it the firmer it will stand, the beveled portion *c* of the support bearing against the steps and in connection with the braces *d e*, rendering the whole much stronger and firmer than where the support is connected to the steps by hinges in the ordinary manner.

The above-described step-ladder is of simple construction, and when folded up compactly, as in Fig. 2, there are no hooks, ropes, or arms hanging loosely in the way. It also possesses great strength, and may be furnished at a moderate cost.

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

The support B, in combination with the side braces, *d e*, and steps A, arranged and operating substantially as set forth.

ABIEL F. SAUNDERS.

Witnesses:

P. E. TESCHEMACHER,  
N. W. STEARNS.