

(No Model.)

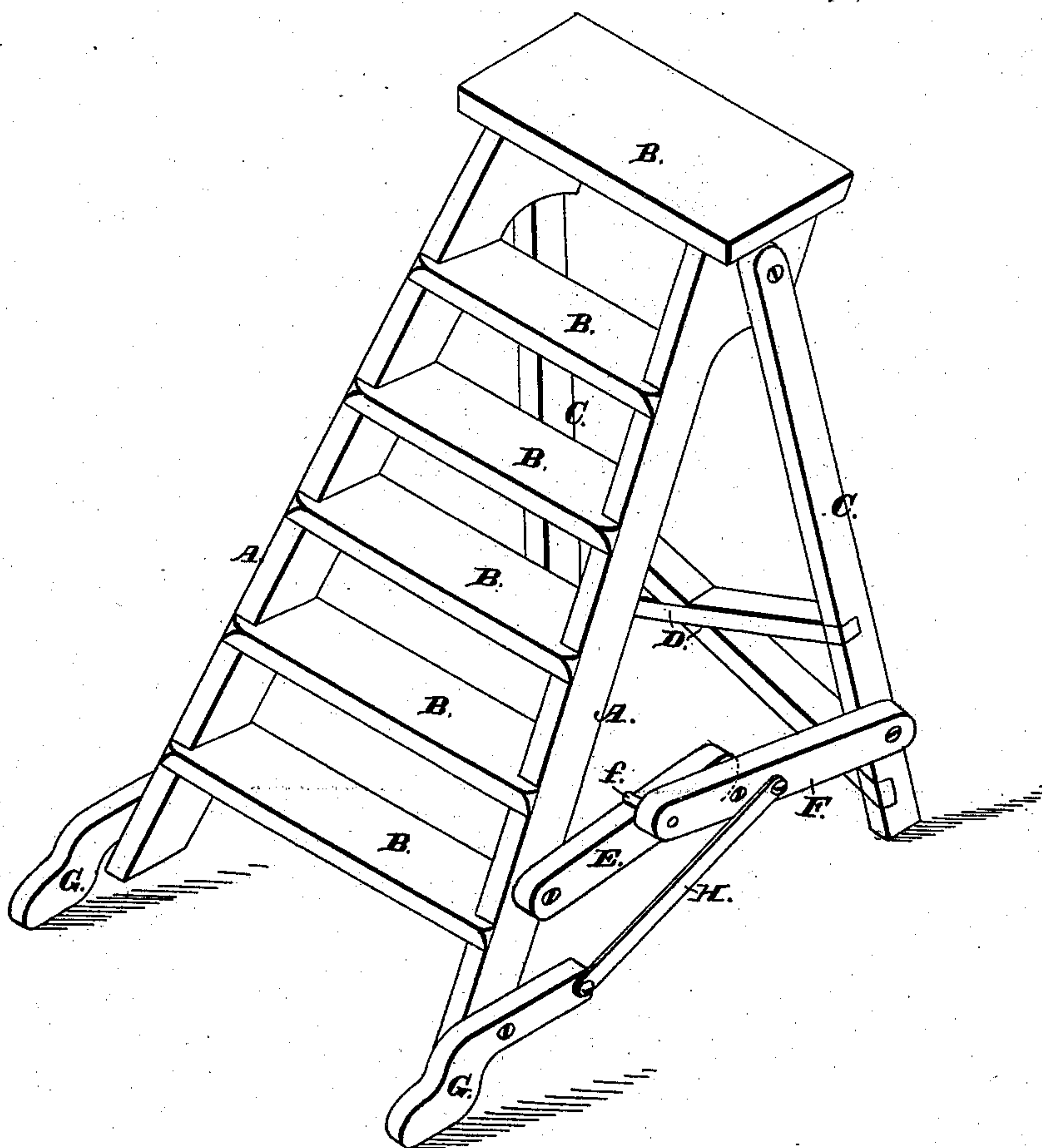
2 Sheets—Sheet 1

P. L. SYLVESTER.  
Folding Step Ladder.

No. 235,827.

Patented Dec. 21, 1880.

Fig. 1.



WITNESSES=

Jas. E. Hutchinson.  
Henry C. Hazard.

INVENTOR.

P. L. Sylvester, by  
Geo. S. Prindle, his Att'y

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

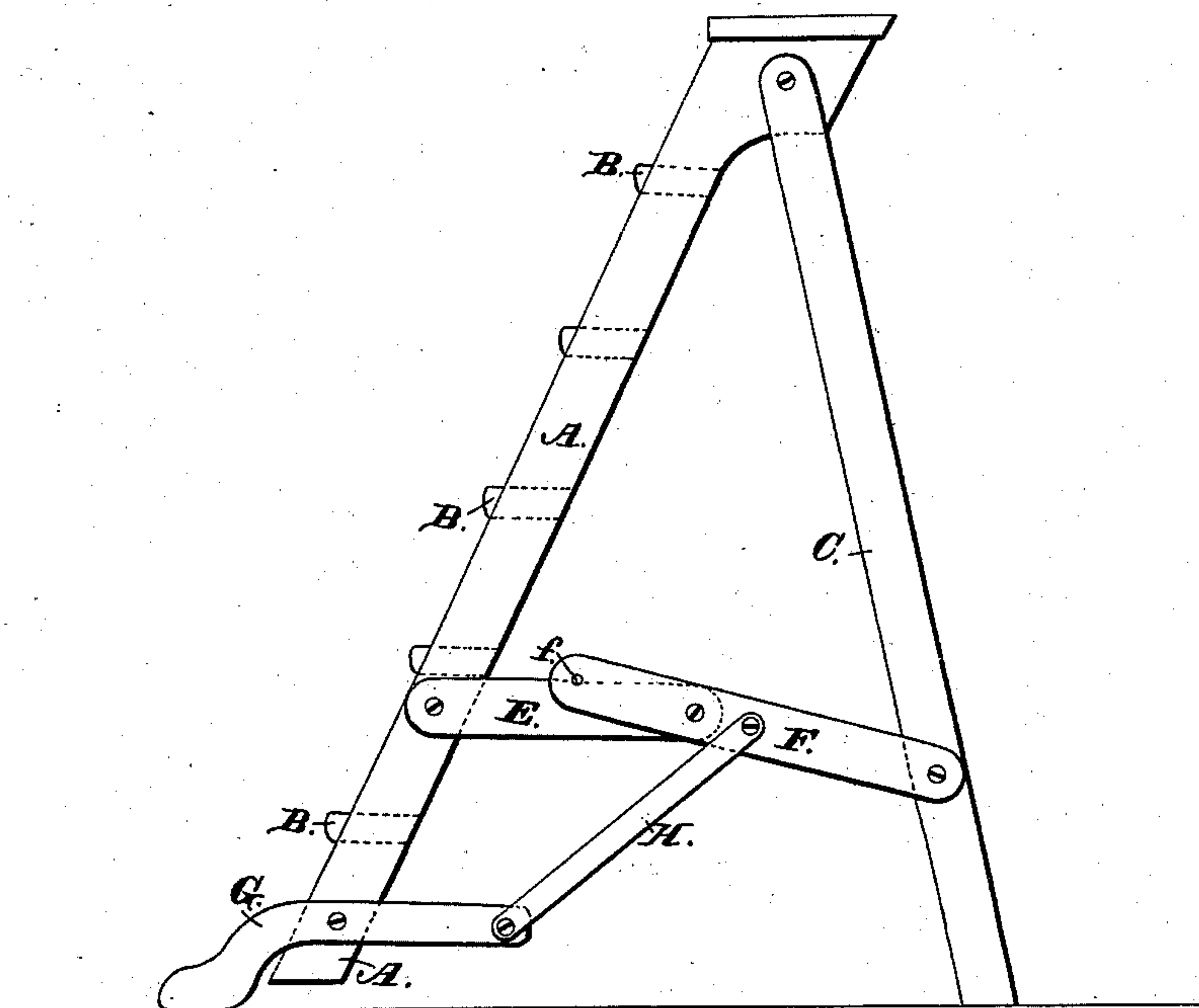
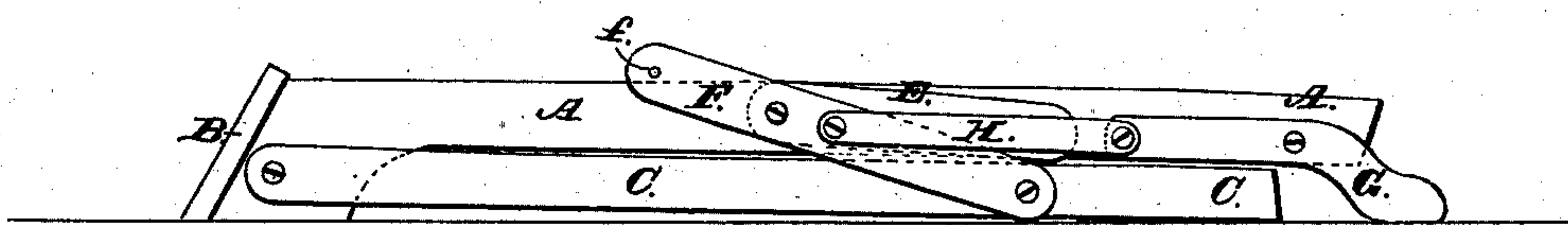


Fig. 3.



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# UNITED STATES PATENT OFFICE.

PHILIP L. SYLVESTER, OF AUBURN, NEW YORK.

## FOLDING STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 235,827, dated December 21, 1880.

Application filed September 3, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP L. SYLVESTER, of Auburn, in the county of Cayuga, and in the State of New York, have invented certain new and useful Improvements in Folding Step-Ladders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my ladder as arranged for use. Fig. 2 is a side elevation of the same, and Fig. 3 is a like view of said ladder when closed together and arranged for storage.

Letters of like name and kind refer to like parts in each of the figures.

The design of my improvement is to render folding step-ladders secure and firm when in use; and to this end—

It consists, principally, in a folding step-ladder in which a portion or the whole of the superimposed weight is sustained by feet that are connected with and operate to draw downward upon the spreading braces, substantially as and for the purpose hereinafter specified.

It consists, further, in the construction and combination of the spreading braces and pivoted feet with each other and with the ladder, substantially as and for the purpose hereinafter shown.

In the annexed drawings, A and A represent the side bars of my ladder, which are connected together at suitable points by means of steps B, which steps have the usual angle with reference to said bars, so that when the latter are inclined, as shown in Figs. 1 and 2, said steps will be horizontal.

Pivoted at their upper ends to the upper ends, at the outer sides, of the side bars, A, are two bars, C, which extend downward and slightly rearward, and have such length as to enable their lower ends to rest upon the floor when the ladder is in position for use, and thereby furnish a support for the upper end of the same. The lower portions of said bars C are connected together by means of braces D, that extend between and are attached to the same.

Pivoted at one end, to the outer face, near the lower end of each side bar, A, is a bar, E, which from thence extends rearward and upward, and has its opposite end pivoted upon the inner face of a bar, F, that extends rearward and downward, and has its rear end pivoted upon the outer face, near the lower end, of the contiguous bar C.

The inner end of the rear bar, F, extends forward beyond the pivotal connection with the bar E, and is provided with a stud, *f*, which rests upon the upper edge of the latter and limits the downward movement of the centers of said bars.

Pivoted near its longitudinal center, to or upon the outer face, at the lower end of each side bar, A, is a foot-bar, G, which, in front of its pivotal bearing, extends in curves forward, downward, and then forward, and rests upon the floor, while the rear end of said foot-bar is connected with the contiguous bar F at or in rear of the pivotal connection, between the same and the bar E, by means of a rod or bar, H, that is pivoted to and extends between said parts.

The lower ends of the side bars, A, are raised above the floor by the foot-bars G, and any weight placed upon the ladder will be supported by the front ends of said foot-bars, while the rear ends of the same will be supported by or upon the bars or spreading braces E and F, the operation of said parts being to draw downward upon the latter and to hold them firmly in place, the downward draft being exactly in proportion to the load placed upon said ladder.

In consequence of the construction described, the ladder is firmly held in position and rendered incapable of closing together, as is frequently the case with other forms of ladder.

If desired, foot-bars may be applied to the rear bars, instead of being applied to the front bars, or they may be applied to both front and rear bars.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A folding step-ladder in which a por-

tion or the whole of the superimposed weight is sustained by feet that are connected with and operate to draw downward upon the spreading braces, substantially as and for the purpose specified.

2. The spreading braces E and F, foot-bars G, and connecting-bar H, in combination with each other and with the side bars, A and A, and rear bars, C and C, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of August, 1880.

PHILIP L. SYLVESTER.

Witnesses:

J. H. WOODRUFF,  
E. D. WOODRUFF.