

O. M. SWEET.
Step-Ladders.

No. 157,556.

Patented Dec. 8, 1874.

Fig: 1.

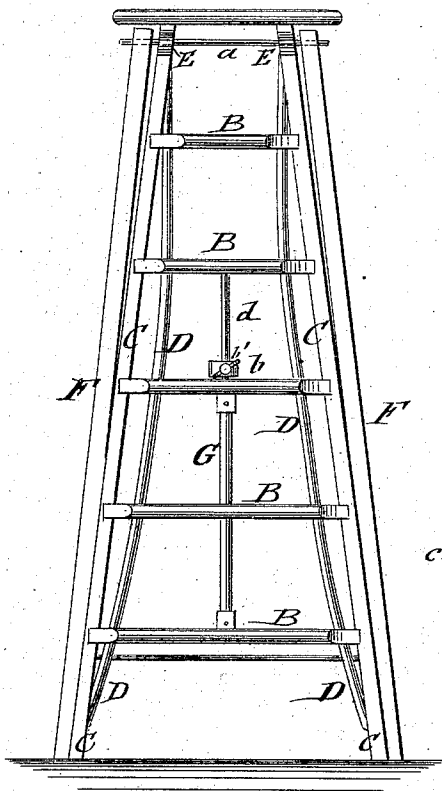


Fig: 2.

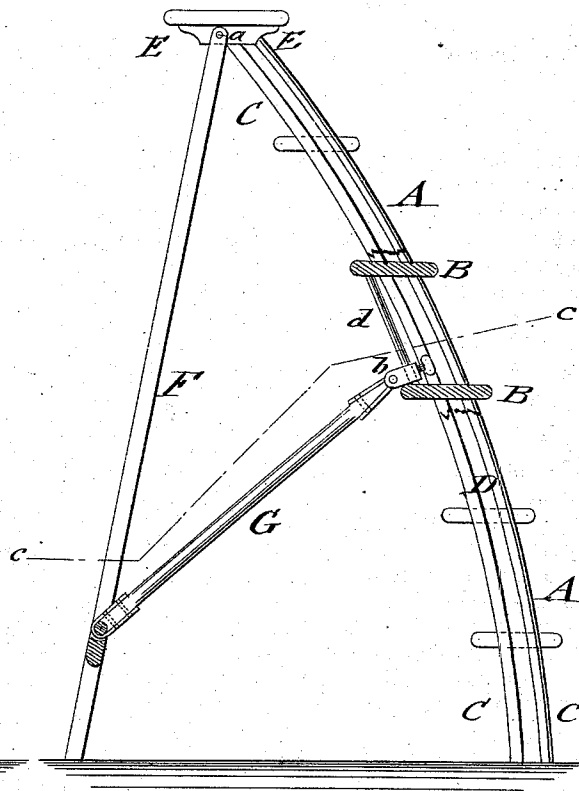
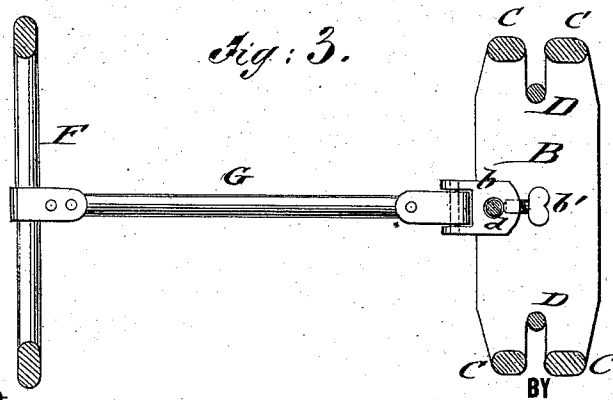


Fig: 3.



WITNESSES:

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ORANGE M. SWEET, OF FORESTVILLE, NEW YORK.

IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **157,556**, dated December 8, 1874; application filed October 10, 1874.

To all whom it may concern:

Be it known that I, ORANGE M. SWEET, of Forestville, in the county of Chautauqua and State of New York, have invented a new and Improved Step-Ladder, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front view, Fig. 2 a side view, and Fig. 3 is a horizontal section on the line *c c*, Fig. 2, of my improved step-ladder.

Similar letters of reference indicate corresponding parts.

The object of my invention is to produce a step-ladder which combines lightness and strength to a considerable degree with ready adjustability and cheapness, so that a superior article for general use is produced.

In my ladder the standard is adjusted to the main body of the ladder by a hinged brace, which slides by a pivoted sleeve with fastening clamp-screw along a guide-rod connecting two middle steps.

In the drawing, A represents the main body of my improved step-ladder, which is constructed of the steps B and of curved supporting pieces or rods C, attached separately to the outer ends of the steps. The steps B are recessed between the stiffening-pieces C in such a manner that the recesses of the middle steps are longest, while those of the upper and lower steps are gradually decreasing in size, so that a curved brace-rod, D, may be sprung at each side into the steps, and produce, by its inwardly-bending curve, a rigid side support to the steps. The ends of brace-rods D are bolted or otherwise firmly applied to the upper and lower ends of the outer pieces C, forming in connection therewith a strong yet light brace-support for the steps, strengthening and stiffening the same to resist the direct and lateral strain thereon.

The upper ends of the step-supporting rods C and D are furthermore bound together by side brackets E, to which the top step B is attached. A lateral rod, *a*, passes through brackets E and the rear side pieces C, and connects, by outwardly-projecting ends, with the standard F of the step-ladder, which swings thereon as required. Standard F consists merely of two upright side pieces and two lateral pieces, to the lower and stronger of which the brace G is hinged, which connects, by a slide-piece or sleeve, *b*, hinged to its upper end, with a central rod, *d*, that is rigidly attached in longitudinal direction to two of the middle steps B. The hinged sleeve *b* adjusts itself readily on the brace for sliding on rod *d* as the standard is carried to or from the body of the step-ladder, and is firmly fastened in the required position for holding the standard by a fastening set-screw, *b'*. The guide-rod may also connect three steps for a wider spread of standard, in which case the intermediate step has to be recessed for the passage of the sliding sleeve. The brace-connection of standard and main body is thereby simplified and lightened without being decreased in strength.

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

The combination of supporting-standard F, hinged brace G, having pivoted sliding sleeve *b*, and set-screws *b'*, with the central step-connecting guide-rod *d*, substantially as and for the purpose described.

ORANGE M. SWEET.

Witnesses:

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