O. SHERWOOD, Jr.

STEP-LADDER.

No. 190,086. Patented April 24, 1877.

Fig. 1.

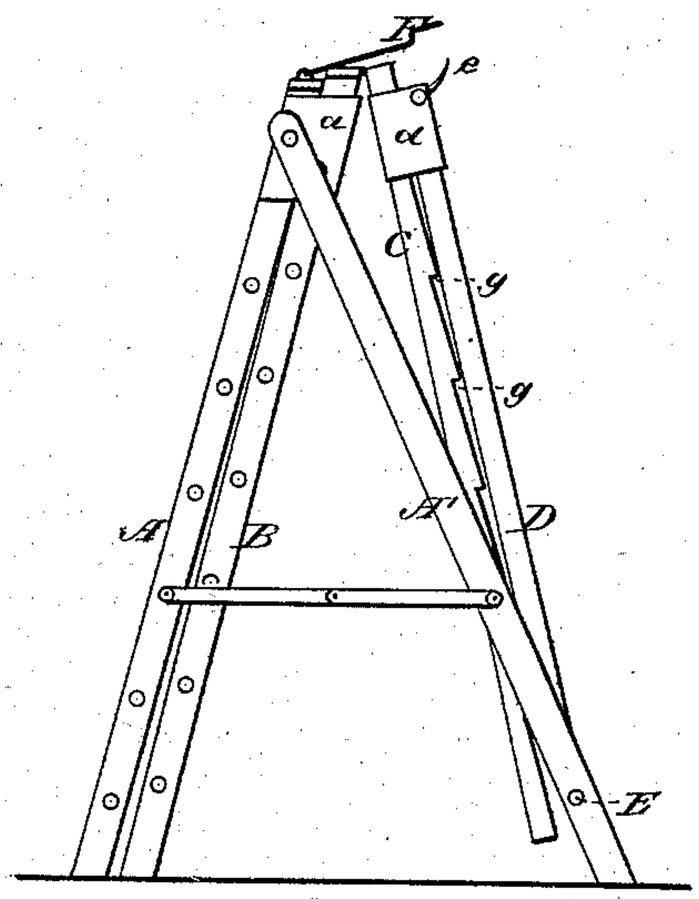


Fig. 3.

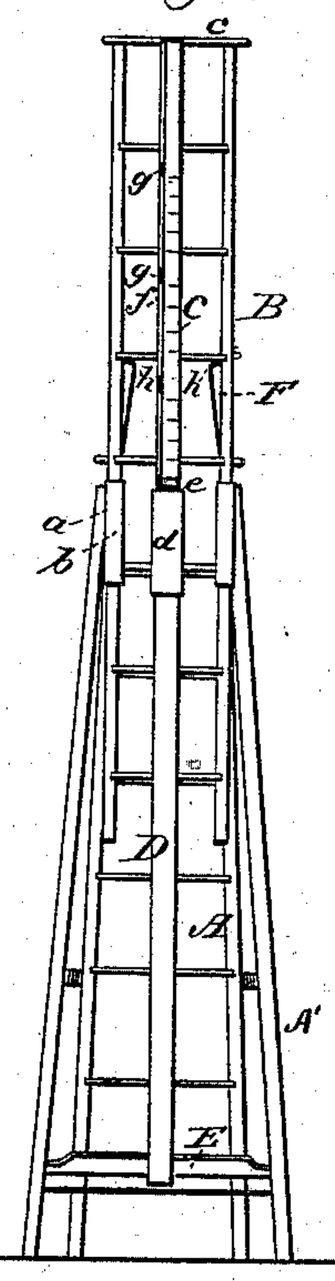


Fig. 2.

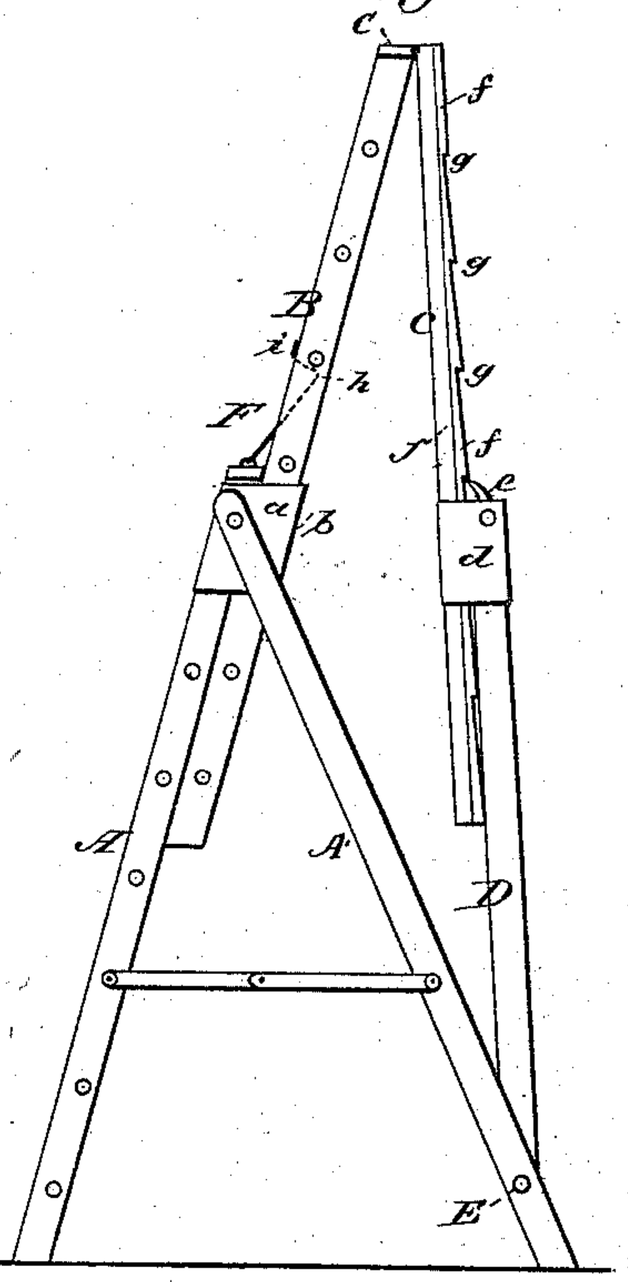
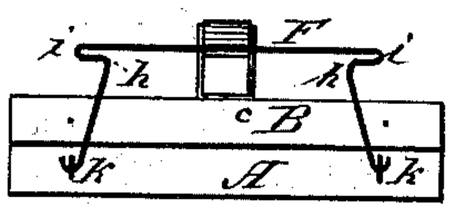


Fig. 4.



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UNITED STATES PATENT OFFICE.

OBADIAH SHERWOOD, JR., OF SUTTON FLATS, QUEBEC, CANADA.

IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **190,086,** dated April 24, 1877; application filed March 6, 1877.

To all whom it may concern:

Be it known that I, OBADIAH SHERWOOD, Jr., of Sutton Flats, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Step-Ladders; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a similar view of the ladder extended. Fig. 3 is a rear view, and Fig. 4 a top plan.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to certain improvements in the construction of extension step-ladders, as hereinafter more fully described, and pointed out in the claims.

In the drawing, A is the front or step portion, and A′ the props or supports, of an ordinary folding step-ladder. To the upper ends of the front A, on each side, is secured a plate or casting, *a*, which projects backward, and has a flange or shoulder, (denoted by *b*,) so as to form a guide for the side pieces of the extension-ladder B, which is arranged behind A. The guide-plates *a* are of a sufficient length to keep the side pieces of the extension-ladder parallel to and closely fitting against the part A, so as to present a compact and neat appearance.

Hinged midway upon the top step *c* of the extension part B is a sliding brace or prop, C, which slides in a sleeve, *d*, secured upon the upper end of the brace D. The latter is mortised into a cross-piece, E, which is pivoted in the side props A′ of the ladder A, so as to allow the two central props or supports C D to adjust themselves automatically at any angle required in extending the movable or sliding section of the step-ladder. *e* is a catch or dog, hinged to the upper end of sleeve *d*, so as to rest, by its own weight, against the prop C, as shown.

To one side of the sliding prop C is bolted, or otherwise secured, a metallic plate, *f*, having a series of notches, *g*, equidistantly arranged. The distance at which these notches are placed apart corresponds to the distance between the steps of the section B.

F is a metallic rod or bail, bent so as to form two lugs or projections, *h h*, and two ears, *i i*, at right angles thereto. This bail is pivoted at *k k* upon the top step of the lower section A, in such a manner that when section B is raised or extended, the ears *i i* will rest or slide against the side pieces thereof, while the lugs *h h* will fall in under the steps as the extension portion is being raised, thereby serving as supplementary props or supports for this section, and taking a portion of the weight or strain to which the extension B may be subjected from off props C and D, so that these may be made of light stuff, which, besides giving an elegant and finished appearance to the ladder, reduces both the weight and the cost thereof.

My improved ladder is, when folded, as compact, and occupies as little room, as any ordinary step-ladder without an extension.

It is simple in its construction, consists of few parts, and can be manufactured at a slight advance on the cost of an ordinary step-ladder, while the scope of its utility is considerably greater.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the lower ladder-section A, having props or supports A′, pivoted cross-brace E, prop D, mortised into cross-brace E, and having sleeve *d* and dog *e*, extension-section B, having hinged prop C, and bail F, all arranged and operating substantially in the manner and for the purpose herein shown and specified.

2. The sliding prop C, having a metal plate, *f*, secured upon one of its sides, and said plate provided with notches *g*, arranged at a distance from each other corresponding to the distances at which the steps of the ladder are placed apart, substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

OBADIAH SHERWOOD, JR.

Witnesses:
EDMUND SMITH,
CYRUS W. SMITH.