O. SHERWOOD, Jr.

FIRE ESCAPE.

No. 190,085. Patented April 24, 1877.

*Fig. 1.*

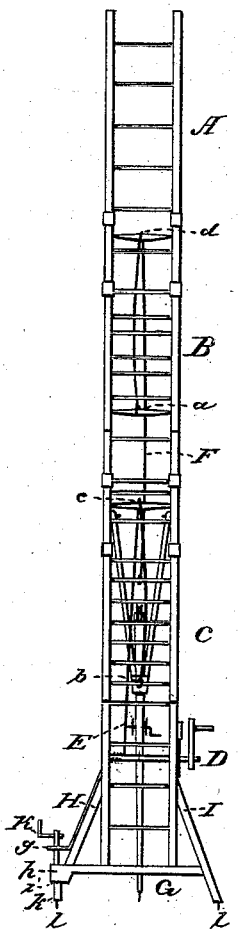



*Fig. 2.*

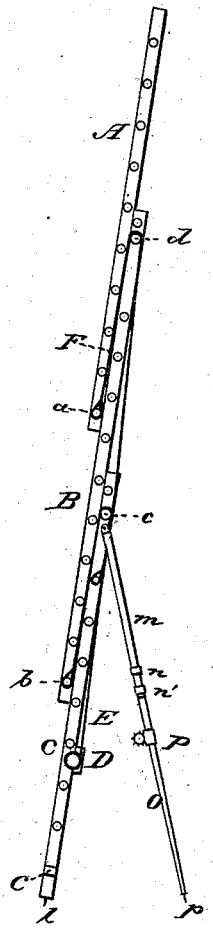
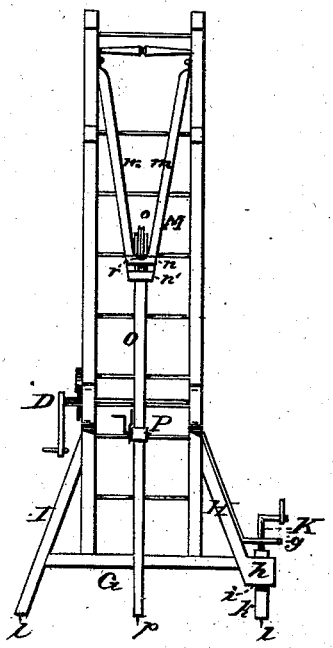



*Fig. 3*




Attest

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# UNITED STATES PATENT OFFICE.

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

## IMPROVEMENT IN FIRE-ESCAPES.

Specification forming part of Letters Patent No. **190,085**, dated April 24, 1877; application filed October 30, 1876.

*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 Fire-Escapes; 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.

Figure 1 is a front elevation, Fig. 2 a side elevation, and Fig. 3 a rear elevation of the lower section, of my improved fire-escape ladder.

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

This invention relates to that class of extension or fire-escape ladders, which are made up of two or more sections, but are not mounted on trucks; and its object is to provide a suitable and easily-operated device for correcting any lateral tilting of such ladders while in use, and for giving them a proper inclination toward the walls of the buildings that are to be ascended, all in the manner hereinafter more fully shown and specified.

In the drawing, A, B, and C are the three sections of a fire-escape ladder having my improvement. The method of elevating the two upper sections A B consists of the arrangement of a windlass, D, near the bottom of the lower section C, as shown, passing a cable, E, from this, over a grooved pulley, *c*, at the top of section C, and fastening it to the lower round *b* of the second section B. Another cable, F, is fastened to the upper round of section C, passed over a grooved pulley, *d*, at the top of section B, and fastened to the lower round *a* of section A. Thus, by operating windlass D, the sections A and B are elevated simultaneously until the extension is formed. The sections are all of equal width, they being placed on top of each other, and secured by iron clamps, in which they slide, as shown. It is obvious that, instead of three, any other suitable number of sections may be employed, the arrangement of elevating-cables being carried out on the principle already described.

The lower section C of my improved ladder is mortised into a cross-brace, G, and from its lower end project two inclined braces, H I, connected, as shown, with cross-brace G. The brace G projects on one side of brace H, so as to form a bracket, *h*, and above it, upon brace H, is secured a metallic bracket, *g*, having a screw-threaded perforation, in which works a set-screw, K, that operates against a rod or beam, *k*, which slides in a mortise or slot, *i*, in bracket *h*. The lower ends of brace I and beam *k* are provided with spikes *l l*, in order to prevent the ladder from slipping or sliding when used, while any lateral or sidewise inclination may be easily and quickly corrected by means of the adjustable beam *k*.

To the rear top side of section C is pivoted a bracket, M, formed by two beams, *m m*, secured together, at the lower end, by metallic clamps *n n'*, which leave a space between them sufficient to permit a plank or beam, O, to slide freely. In the upper end of beam O is a grooved pulley *o*, and the lower end of beam O has a windlass, P, from which a cable passes over pulley *o*, to a projection, *r*, of clamp *n*, where it is fastened. The lower end of beam O has a spike, *p*, to prevent it from sliding.

The method of operating my improved fire-escape ladder will be readily understood from the foregoing description. The ladder is first placed in a suitable position, its inclination being regulated by means of the windlass P on bracket *m m* O, upon which it rests—or, rather, which supports it in its inclined position. The sections A B are then elevated by means of windlass D in the manner described, any tendency to incline laterally being corrected by set-screw K being operated against beam *k*.

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

1. The combination of the lower section C of an extension-ladder with the spiked beam I, cross-brace G, and beam H, the latter having brackets *g h*, in which operate the set-screw K and sliding spiked beam *k*, substantially as and for the purpose hereinbefore set forth.

2. The improved extension-ladder herein described, consisting of sections A B C, wind-

lass D, cables E F, pulleys *c d*, pivoted bracket *m m*, sliding beam O, having pulley *o* and windlass P, and braces G I H, the latter having brackets *g h*, in which operate sliding beam *k*, and set-screw K, all combined and arranged to operate substantially in the manner, 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:

HECTOR RETTIER,

J. BROSSOIT.