S. B. SEYMOUR.

Ladder.

No. 197,294. Patented Nov. 20, 1877.

Fig. 1.

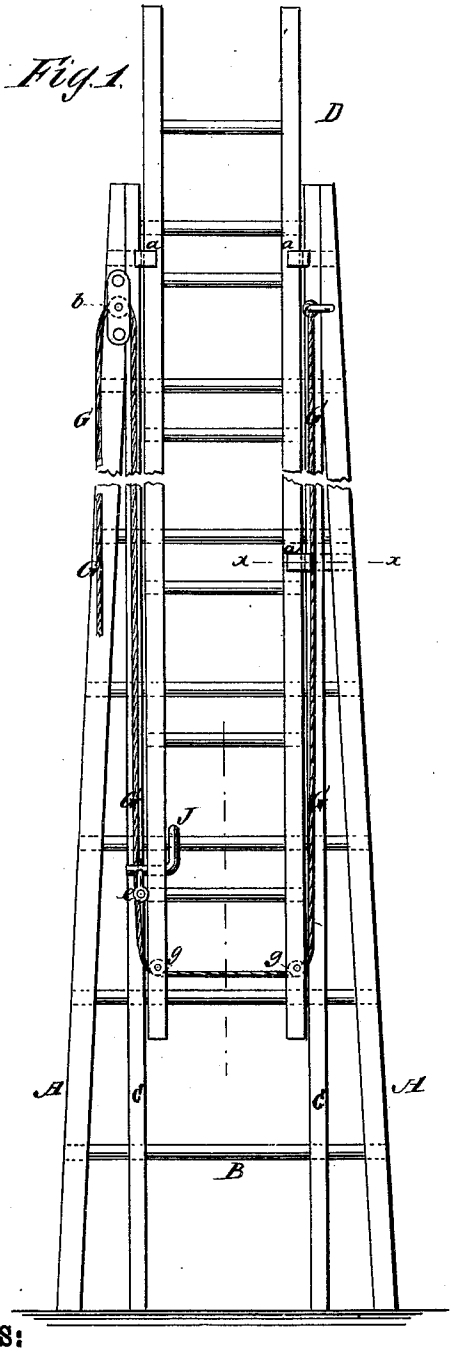


Fig. 2.

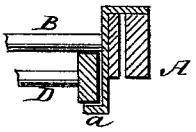
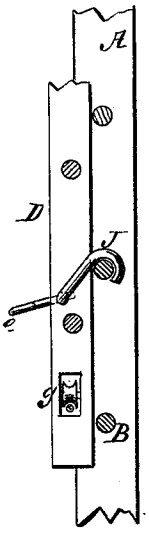


Fig. 3.



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SAMUEL B. SEYMOUR, OF MOUNT MORRIS, NEW YORK.

IMPROVEMENT IN LADDERS.

Specification forming part of Letters Patent No. **197,294**, dated November 20, 1877; application filed August 11, 1877.

To all whom it may concern:

Be it known that I, SAMUEL B. SEYMOUR, of Mount Morris, in the county of Livingston and State of New York, have invented a new and Improved Ladder, of which the following is a specification:

This invention relates to ladders which are composed of two or more sections, put together so that a long or a short ladder can be made at will.

The nature of my invention consists in combining with a main tapered ladder two guide-bars, which are parallel to each other, and receive through them the foot-rounds, and between them an extendible ladder-section, as will be hereinafter explained.

In the annexed drawings, Figure 1 is a front view of parts of my improved ladder. Fig. 2 is a horizontal section through the ladder-sections in the plane indicated by dotted line *x x*. Fig. 3 is a detail, showing the hook which supports the upper section of the ladder.

Similar letters of reference indicate corresponding parts.

The main tapered ladder consists essentially of two side bars, A A, which are secured together by means of rounds or foot-rests B, and which are widely spread at the bottom and contracted at the top, making what is known as a "tapered ladder," which, when it is erected, will be very steady. Between the two side bars A are two bars, C C, which are parallel to each other, and which receive through them the rounds B. These intermediate bars C C form guides for an adjustable ladder-section, D, which is lengthwise movable between the guides, and held in place by means of clips *a*.

The guides C C may extend the entire length of the main ladder-section, or they may be shorter than this section.

Near the lower ends of the side bars of the adjustable ladder-section D, and attached thereto, are two grooved pulleys, *g g*, and near the upper end of one of the bars A of the main ladder-section is another grooved pulley, *b*. Opposite this pulley, and attached to the other bar A of the main section of the ladder, is a rope, G, which is passed beneath pulleys *g g* and over pulley *b*. This rope is long enough to extend to the foot of the ladder, so that a person, by drawing on the rope, can extend the section D and obtain a substantial ladder double the length of the main section.

It will be observed that the bars C C not only serve as guides for the adjustable section D, but they greatly stiffen and strengthen the main section and its rounds without materially adding to the weight thereof.

To one of the rounds of section D, near its lower end a hook, J, is pivoted, to the stem of which an arm, *c*, having an eye formed on its end, is secured, to which eye a cord may be attached for allowing the hook J to be held up free from the rounds B of the main ladder-section. When the ladder-section D is raised as high as desired the hook is allowed to engage with one of the rounds B of the main section, thus securely holding section D elevated.

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

The combination of the converging side bars A A and parallel strips C C, connected by rounds B with an extension-ladder, adapted to slide within and be guided by said strips, as and for the purpose specified.

SAMUEL B. SEYMOUR.

Witnesses:

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