

(No Model.)

R. W. WHITEHURST.
LADDER.

No. 476,179.

Patented May 31, 1892.

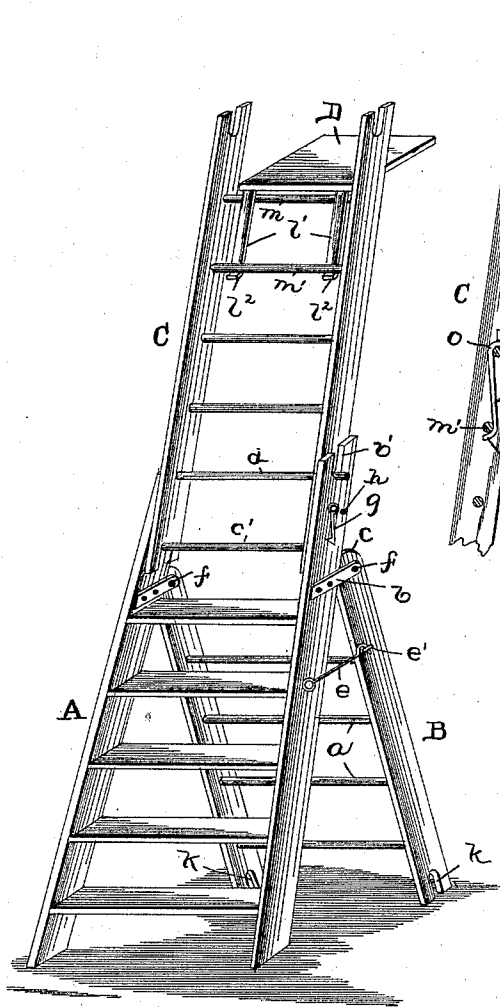


Fig. 1.

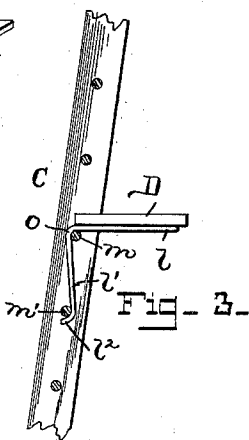


Fig. 3.

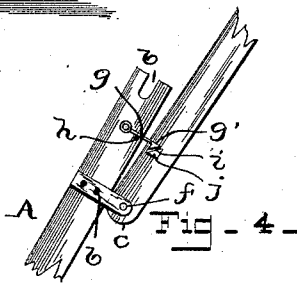


Fig. 4.

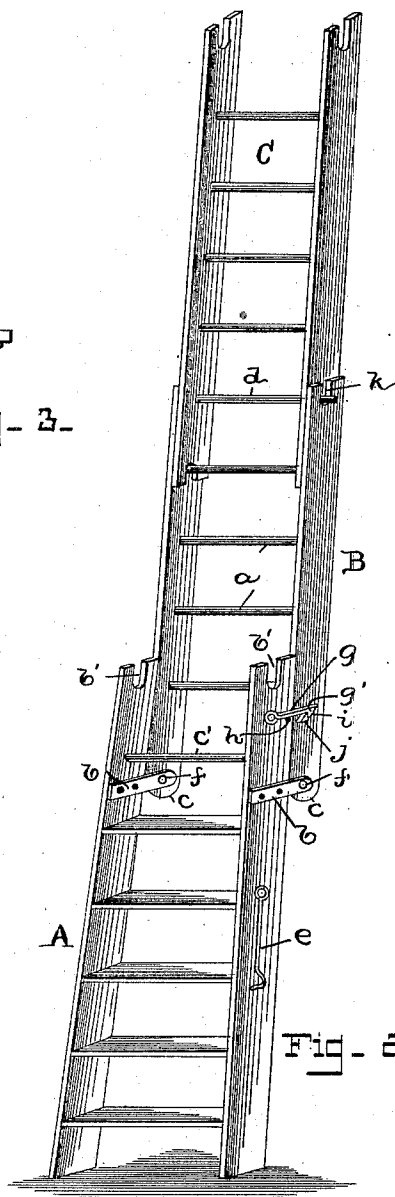


Fig. 2.

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UNITED STATES PATENT OFFICE.

ROBERT W. WHITEHURST, OF NORFOLK, VIRGINIA, ASSIGNOR OF ONE-HALF
TO McD. L. WRENN, OF SAME PLACE.

LADDER.

SPECIFICATION forming part of Letters Patent No. 476,179, dated May 31, 1892.

Application filed January 9, 1892. Serial No. 417,446. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. WHITEHURST, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Ladders, of which the following is a specification.

This invention relates to an extension step-ladder which is convertible into a sectional long ladder. As a step-ladder it is specially adapted for fruit-gathering and like uses and as a sectional long ladder may be employed as an ordinary ladder for various purposes.

The object is to provide a simple construction which can be readily changed from one adjustment to another and will comprise a stable structure in either form.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a perspective view of the ladder as an extension step-ladder. Fig. 2 shows the ladder converted into a sectional long ladder. Fig. 3 shows a section through two rounds of the ladder, illustrating the manner of supporting a basket rest or shelf; Fig. 4, a detail of the automatic catch for holding the two hinged sections together when the ladder is extended to form a sectional long ladder.

The letter A designates the step-section of the ladder, and B another section of the same width hinged to the back thereof and having rounds *a* like any ladder-section. This section B is hinged to the section A by means of metal straps *b*, secured rigidly to the sides of the latter and pivotally to the sides of the section B, the upper ends of which are rounded, as shown at *c*. The side bars of the section A project above the hinges and have notches *b'* in their upper ends and a round *c'*, connecting them.

When the ladder is used as a step-ladder, the section B serves as the prop and is held in position by hooks *e* on the section A, which engage staples *e'* on the hinged section B. An

extension C, having one round *d* with projecting ends and notches in the ends of its side bars, is fitted to the upwardly-projecting portions of the step-section A by causing the notches and rounds to engage in the usual way. The opposite end of the extension-piece is constructed similarly to its lower end, so that another section may be connected, if desired. Arranged in this way the ladder is peculiarly adapted for fruit-gathering and like uses where the upper end has no rest to lean against and it is desired to reach beyond the base of the ladder and farther than possible with the ordinary step-ladder.

When a long ladder without prop is desired, the hooks *e* are released and the section B turned on its pivots *f* or opened outward until it fits against the section A and forms a continuation thereof, as shown in Fig. 2, the rounded ends *c* permitting this complete reversal of the prop. The latter is held in its vertical position against the section A by latches *g*, which are pivoted to the said section A and rest on stop-pins *h*, whereby they are held in a substantially horizontal position when the ladder is up. These latches have catches *g'* on their outer ends with beveled outer faces *i*. When the section B is turned up against the section A, pins *j* or staples *e'* on said section B strike the beveled surfaces of the catches *g'* and raise the latches, whose catches drop behind the said pins *j*, and thus hold up the section B. When the ladder is used as a step-ladder, the latches *g* may be thrown back on their pivots, so as not to project in the way. It will be observed that by this construction the locking of the sections A and B together is automatic. By means of the above construction the pins *j* or staples *e'* are engaged by the hooks *e* or *g*, respectively, and serve to hold the section B whether the device is used as a step-ladder or as an extension-ladder.

Notches *k* are provided in the outer ends of the side bars of the hinged section B to adapt it for receiving the extension C, which is narrower than either of the sections A and B and fits between their side pieces, respectively, as shown in Figs. 1 and 2.

It will be seen my construction permits the ladder to be very readily changed from one form to another.

5 A detachable and adjustable shelf D is provided for use in connection with this ladder and is supported on two arms *l*, secured to its under side and bent to form long extensions *l'*. This shelf is adjusted by resting the bends *o* in the arms over one round *m* of the ladder,
10 with the ends of the extension *l'* behind the round *m'* next below, when the shelf will be firmly held and braced. The lower ends *l''* of said extension are curved, as shown, to take partly under the round *m'*, so as to prevent
15 the arms from sliding upward and becoming free of the said round *m'*. It is obvious that this shelf may be fixed at any part of the ladder in this way. It may be used as a rest for a fruit-basket or a pail or for any other similar
20 purpose.

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

In a ladder, the combination, with two sections of the same width, each having its side 25 pieces extended beyond the last rung and notched at one end, one of which sections is shorter than the other one and is hinged to the longer one near the upper end thereof, whereby it may be used as a prop or an extension 30 for the longer section, the notched ends of each of said sections being adapted to receive the notched ends of a narrower section, of two hooks upon the longer section, one above and one below the hinge, and locking 35 devices upon the shorter section, adapted to be engaged, respectively, by the hooks when said section is in either of its two positions, substantially as set forth.

In testimony whereof I affix my signature in 40 the presence of two witnesses.

ROBERT W. WHITEHURST.

Witnesses:

GEO. W. DEY,

WALTER H. DEY.