A. C. McKendree,

Ladder.

No. 78,988. Patented July 16. 1868.

Fig. 1.

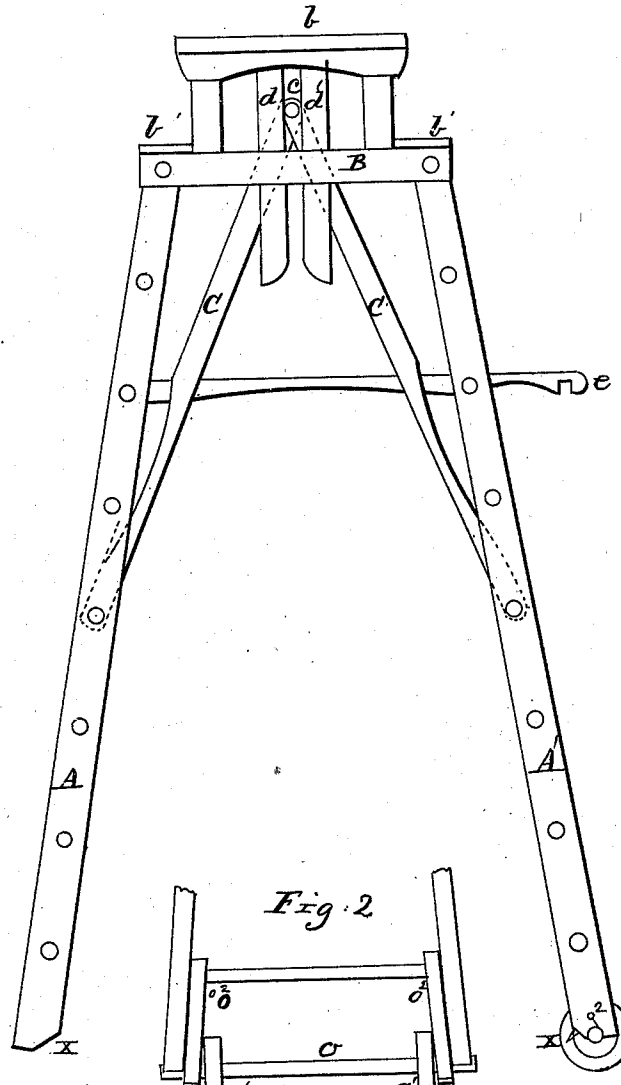


Fig. 2.

Fig. 3.

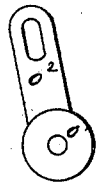
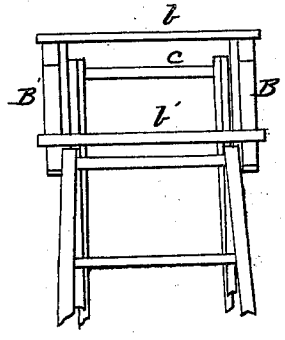


Fig. 4.



Witnesses:
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United States Patent Office.

ALBERT C. McKENDREE, OF CONNEAUT, OHIO.

Letters Patent No. 78,988, *dated June* 16, 1868.

IMPROVED LADDER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALBERT C. McKENDREE, of Conneaut, in the county of Ashtabula, and State of Ohio, have invented a new and improved Ladder; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to certain improvements in step-ladders, the novelty of which consists in a simple device, by means of which the ladder is readily moved from place to place, when desired, as will be described hereinafter.

Figure 1 represents a side elevation of my improved ladder, and

Figures 2, 3, and 4, views of different parts detached.

In the drawings—

A A′ represent the two sides of the ladder, constructed in the usual tapering form.

B B′ represent sides of a frame, which are connected, by means of the top step *b* and side steps *b′ b′*. Beneath the steps are hung, by the upper rounds, the ladder A A′, as shown.

C C′ represent braces, hinged at and extending upward from about the centre of the ladders A A′ to a point beneath the centre of the step *b*, at which point they are attached to the bar *e*.

d d′ represent slats, rigidly attached to the centre of the sides B B′ of the frame, and so arranged as to form guides for the end of the bar *e*, which projects outward for this purpose.

e represents a notched bar, hinged at one end, by which means the ladders are held at the desired distance apart.

O represents a frame, consisting of the shaft *o*, having the loose rollers o^1 and slotted bars o^2, which latter are connected with the lower round of the ladder A′.

It will be observed that the ends of the ladder A′ are constructed with semicircular notches o^3, into which fit the outer ends of the shaft *o*, as shown.

x x represent pins, inserted in the ends of the ladders A A′, for the purpose of preventing the latter from slipping. These may be used or not, as may be desired.

From this description, the operation of my invention will be readily understood.

The ladders A A′ may be drawn together or pushed apart, according to the height desired, they being held firmly in either position by the bar *e*.

If the pins are used, these will enter the floor or earth, and also serve to hold the ladder firmly in place. The bar *e* of the braces C C′ moves freely up and down in the guides *d d′*, thus accommodating itself to any change in the position of the ladders. By this arrangement, the steps *b b′* of the ladder are kept always in the same line, and any proper amount of weight may be placed upon any part of the ladder and steps without danger of its shifting or changing position.

When it is desired to move the ladder, one side A′ is elevated, and the shaft *o* is allowed to slip under and fit into the semicircular notches o^3; this operation being easily performed by means of the slotted bars o^2. The other side of the ladder then being raised, it may be trundled to any desired place, which being reached, the shaft *o* is readily displaced, and the ladder is ready for use. This arrangement may be attached to both sides, if necessary.

By the general construction and arrangement herein described, a strong and simple ladder is obtained, which can be moved, if necessary, by a child. It will be found especially convenient, however, for painters, plasterers, and for use in orchards, where a firm and broad surface is necessary. This ladder will raise and lower two-thirds faster than any other in use.

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

The shaft O, roller o^1, and slotted bar o^2, when combined and arranged with the ladder A′, as and for the purpose set forth.

This specification signed and witnessed, this sixth day of April, 1868.

ALBERT C. McKENDREE.

Witnesses:

SAM'L P. FENTON,

CHANCY L. ANDREWS.