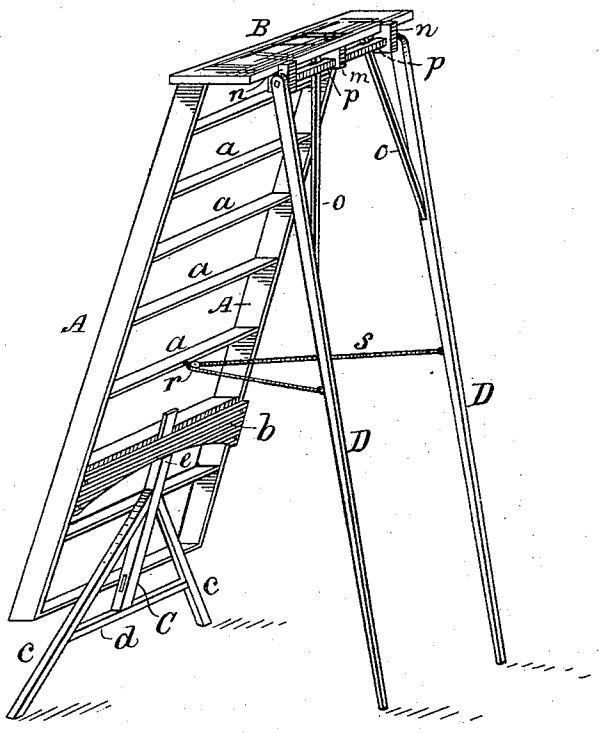
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A. E. PARR & W. C. EDWARDS.

STEP LADDER.

No. 455,973. Patented July 14, 1891.

Fig. 1.



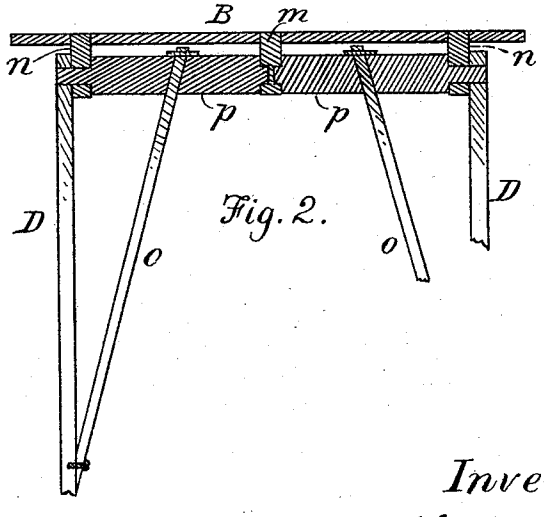


Fig. 2.

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Fig. 3.

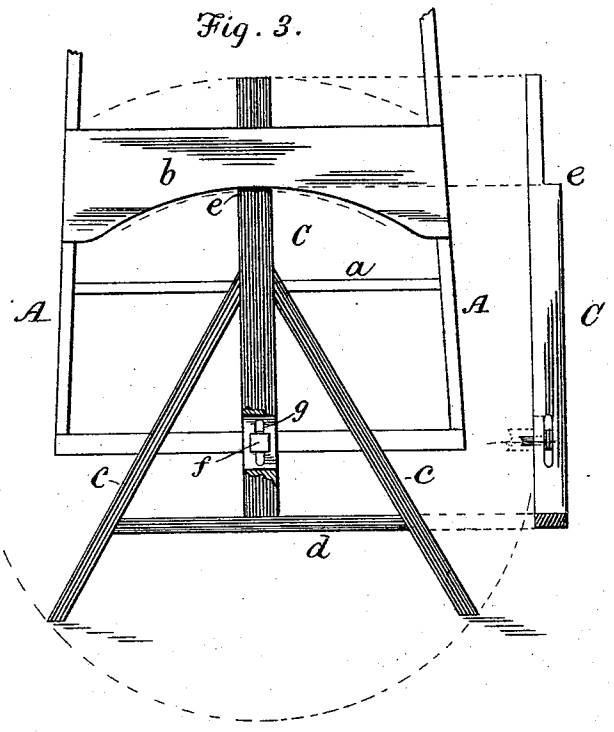


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALEXANDER E. PARR, OF HARKER'S CORNERS, AND WILLIAM C. EDWARDS, OF PEORIA, ILLINOIS.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 455,973, dated July 14, 1891.

Application filed December 13, 1890. Serial No. 374,573. (No model.)

To all whom it may concern:

Be it known that we, ALEXANDER E. PARR, of Harker's Corners, and WILLIAM C. EDWARDS, of Peoria, both being citizens of the United States, residing in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Step-Ladders; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to step-ladders; and it consists in certain improvements in the construction of the same, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of a step-ladder provided with our improvements. Fig. 2 is a sectional rear view of the upper part of the ladder. Fig. 3 illustrates the foot-piece connected with the lower part of the ladder. Fig. 4 is a cross-section of the vertical standard of the foot-piece.

A designates the main stiles or side pieces of the step-ladder, provided with the steps *a*, the platform B being secured to the upper extremities of said side pieces, as shown. To the rear edges of the sides, toward the lower end of the ladder, is fastened a cross-bar *b*, the lower edge of which is curved, as seen in Fig. 3, for the purpose hereinafter mentioned.

A foot-piece for the step-ladder is formed of a vertical standard C, two inclined braces *c*, and a cross-bar *d*, the parts peing connected firmly together, as seen in Fig. 3. The upper part of the standard C is reduced and a shoulder *e* is thus formed on the rear face of the standard, and when the foot-piece is adjusted in place the said reduced portion extends up between the cross-bar *b* and one of the steps *a*, the shoulder *e* being close against the curved lower edge of the bar *b*. A loose connection of the standard C with the ladder is formed by a bolt *f*, which is passed through a slot *g* in said standard into a cross-bar or step at the lower end of the ladder.

As will be seen, when the device is set in position, the main part of the ladder rests on the shoulder *e* of the standard C, the curved edge of the bar *b* being in contact with the shoulder and the main ladder being held somewhat from the ground by the foot-piece. By this construction the foot-piece is readily adjustable to any uneven surface of the ground, and the main ladder is kept in its proper position, the shoulder *e* moving along the curved edge of the bar *b* either to the right or left, according to the inclination of the ground-surface, and the bolt *f* forming a loose pivotal connection and holding the standard C to a central point in the lower end of the ladder.

To the platform B are fastened three brackets or hangers *m* and *n*, in which two bars *p* are journaled or are pivotally connected therewith, the central hanger *m* receiving one end of each bar and the outer hangers *n* each receiving one end of a bar. The long props or standards D are each secured at its upper end to the extended outer end of a bar *p*, and said props are further secured to said bars *p* by means of the braces *o*. A pulley *r* is connected with one of the steps *a* of the ladder, and a cord or chain *s* is passed about said pulley and is connected with each of the props D. The props thus constructed and connected with the platform are severally adjustable, and when the ladder is placed on an uneven surface the said props may be set at different inclinations, as desired. The hangers *m* and *n* may be arranged so that the bars *p* will not be on the same straight line, but at an obtuse angle with each other, and the props D will diverge downward and occupy a wider space on the ground.

We claim—

1. In a step-ladder, the combination, with the side pieces provided with steps and a cross-bar fastened to said side pieces and having a curved lower edge, of a standard provided with a shoulder *e* and adapted to connect with said cross-bar, said standard being loosely connected by a bolt with the lower part of the ladder, substantially as and for the purposes described.

2. The combination, with the side pieces provided with steps *a* and cross-bar *b*, of a foot-piece provided with a slotted standard C, provided with braces, and a securing-bolt passed through a slot in the standard, whereby the said standard is secured to the lower

part of the ladder, substantially as and for the purposes described.

3. The combination, with the side pieces and steps of a ladder, of a platform at the top, said platform being provided with a series of hangers, two bars which are severally journaled in two of said hangers, and two props, one of which is connected with each of said bars, substantially as set forth and described.

4. The platform B, provided with hangers m and n, in combination with the bars p, which are journaled in said hangers, props D, pulley r, carried by a step a, and a cord or chain secured to the props and passing about said pulley, substantially as and for the purposes described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

ALEXANDER E. PARR.
WILLIAM C. EDWARDS.

Witnesses:
L. M. THURLOW,
A. KEITHLEY.