(No Model.)

C. E. LINCOLN.

STEP LADDER.

No. 600,730. Patented Mar. 15, 1898.

Fig. 1.

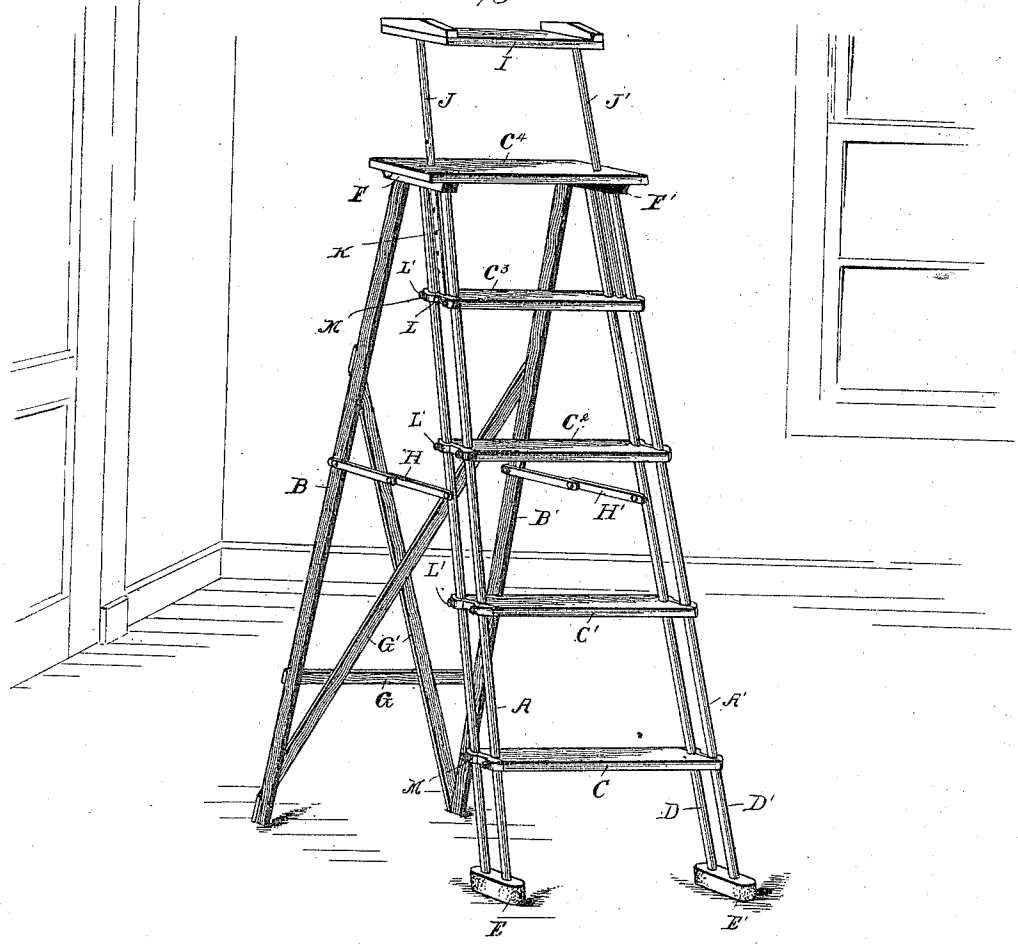


Fig. 2.

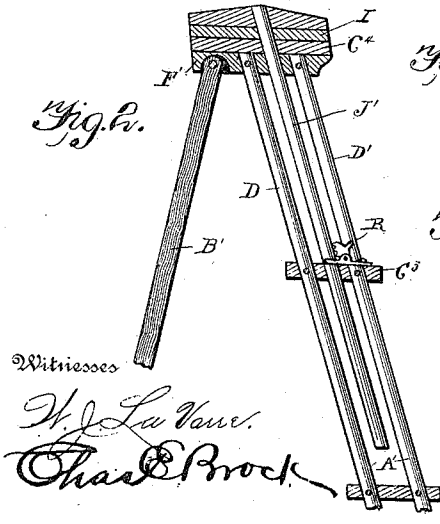


Fig. 3.

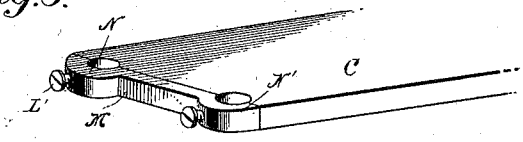


Fig. 4.

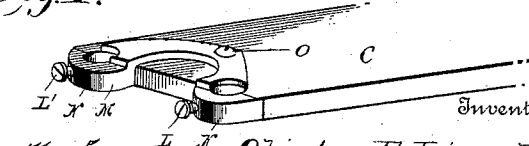
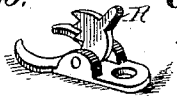


Fig. 5.



Witnesses

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CLINTON E. LINCOLN, OF MOREHEAD CITY, NORTH CAROLINA.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 600,730, dated March 15, 1898.

Application filed June 2, 1897. Serial No. 639,137. (No model.)

To all whom it may concern:

Be it known that I, CLINTON E. LINCOLN, residing at Morehead City, in the county of Carteret and State of North Carolina, have invented a new and useful Step-Ladder, of which the following is a specification.

My invention relates to step-ladders, and has for its object to furnish a device of this class which shall combine in its structure strength and durability with simplicity, cheapness, lightness, and elegance of appearance.

A further object of my invention is to furnish a step-ladder having the qualifications before described with an extensible and adjustable shelf which when folded down and not in use will lie upon and form a part of the top step.

With these objects in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a step-ladder embodying my invention in position for practical use. Fig. 2 is a detail view showing a vertical section from front to rear through the upper part of the ladder with the extension-shelf closed down, the lower part of the ladder being broken away. Fig. 3 is a detail perspective view of a part of a step, showing one of the socket-irons for securing it to the supporting-rods which form the front legs of the ladder; and Fig. 4 is a similar detail view showing, in a slightly-modified form, the same parts illustrated in Fig. 3. Fig. 5 is a detail view.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letters, A A′ are the front legs, B B′ the rear legs, and C C′ C^2 C^3 C^4 the steps, of a step-ladder, C being the bottom and C^4 the top step. These steps are of ordinary construction, except as hereinafter specified. The front legs are composed of two rods or arms D D′, which rest in sockets in small base-blocks E E′ on the floor, pass through sockets in each of the steps, and enter sockets in brackets F F′, secured to the under side of the top step C^4, the upper ends of the rods being cut off flush with the top of said brackets and the bottom of said step. The rear legs B B′ are suitably connected together and stiffened by a cross-bar G and diagonal brace G′ and are pivoted at their upper ends in recesses cut in the bottom of the brackets F F′. This pivotal connection permits them being moved toward and away from the front legs, this movement being limited and controlled by pivoted connecting-bars H H′, attached at their respective ends to the rear and front legs and adapted to fold together when the rear legs are folded against the front legs.

I is a shelf of the same dimensions horizontally as the top step C^4, which lies parallel to and above the said step and is mounted upon two rods J and J′, which pass down through the top step and the brackets F and F′, between and parallel to the rods D and D′, and through a socket or bore in the step C^3. Each of these rods is provided with a series of holes K to receive the adjusting-screw L, threaded in the central socket of a socket-iron M, attached to each end of the step, or, as in Figs. 2 and 5, a dog R may be used. By this means the shelf is adjustable to any suitable distance above the top step and may be lowered to lie closely upon said step and form a part thereof. The steps C, C′, and C^2 may each be provided on each end with a socket-iron M, (see Fig. 3,) from which the central socket may be omitted, if desired. The rods D and D′ pass through the end sockets N N′ of the socket-irons M, each of which sockets is provided with an adjusting-screw L′ for securing the rod and step rigidly together in any desired position. The construction of the socket-irons may be somewhat varied, and they may be secured to the steps in any approved manner. In Fig. 4 I show the socket-iron provided with a flat plate, which lies on top or bottom of the step and is secured thereto by means of a screw O. The socket portions of this construction are semicircular and are dropped slightly below the fastening-plate and lie against the ends of the steps, so as to complete the sockets, one-half of each of which is formed in the end of the step.

The base-blocks E E′ are preferably to be made of rubber to take firm hold on the floor and prevent the ladder from slipping.

By means of the construction hereinbefore described I am enabled to adjust the steps to any desired distance apart and readily secure them in such adjusted positions to adapt the ladder for the use of larger or smaller persons. The extension-shelf is especially useful for holding buckets or tubs and other necessary articles for operating upon windows, walls, &c., and, being mounted above the top step, is in the proper position for use by a person standing upon the upper steps of the ladder.

The ladder presents a graceful appearance when extended for use, is light and strong, and may be readily folded and packed away in a small space when not in use.

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

1. In a step-ladder, the combination of a pair of parallel rods at each end thereof forming the rigid legs, a step mounted upon the top of said parallel rods, a lower step having three sockets at each end, through the outer two of which said rods pass, a shelf lying parallel to and above the top step, two rods secured to said shelf passing down through the top shelf and the central socket of the shelf below and provided with a series of holes, and an adjusting-screw at said central socket for engaging in said holes and securing the shelf at any desired height.

2. In a step-ladder, a step having semicircular notches cut in the ends thereof and socket-irons secured to the ends of the shelf having also semicircular notches to complete the circular sockets, substantially as set forth.

3. In a step-ladder, the step having semicircular notches in its ends in combination with a socket-iron consisting of two semicircular end pieces to lie against the ends of the step to complete the sockets, secured together by a flat plate adapted to be secured to the step, substantially as set forth.

CLINTON E. LINCOLN.

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