(No Model.)

W. PRICE.

STEP LADDER.

No. 590,335. Patented Sept. 21, 1897.

Fig. 1

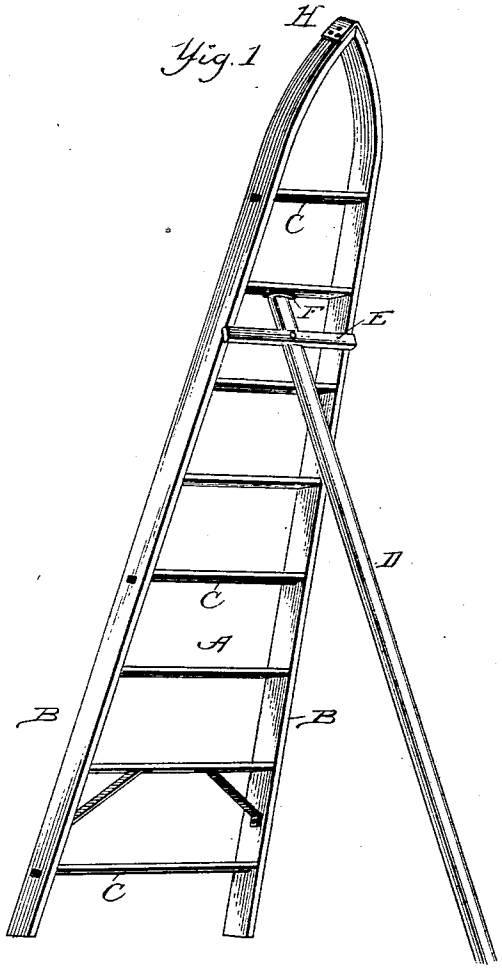


Fig. 2.

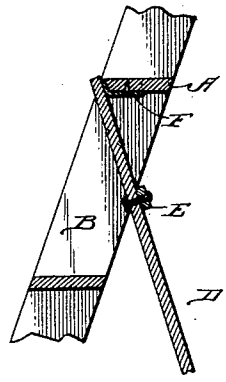
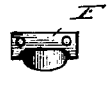


Fig. 3.



WITNESSES:

Harry S. Dobson.

L. D. Heinrichs.

INVENTOR

Walter Price

BY

Miller & Brown

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WALTER PRICE, OF NATIONAL CITY, CALIFORNIA.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 590,335, dated September 21, 1897.

Application filed February 23, 1897. Serial No. 624,689. (No model.)

To all whom it may concern:

Be it known that I, WALTER PRICE, a citizen of the United States, residing at National City, in the county of San Diego and State of California, have invented certain new and useful Improvements in Step-Ladders; and I 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.

The invention is intended especially to secure a more satisfactory step-ladder for use in orange-groves, where lightness, rigidity, and adaptability for use in many peculiar situations are of the greatest importance, but obviously a step-ladder having special fitness for such use is also adapted for more general purposes. This ladder consists of two distinct parts—a set of steps and devices for supporting the set of steps in an inclined position—and while the two parts are preferably not hinged together or otherwise connected they are adapted to form, when brought into proper relation and bearing the weight of the user, an unusually rigid whole. Since it is in some respects preferable to have the inclined set of steps supported by a single leg, and since the invention may be embodied in such a construction, such construction has been selected for the purposes of illustration.

In the drawings, Figure 1 is a perspective view of the complete apparatus when ready to be mounted by the user. Fig. 2 is a partial section perpendicular to the planes of the steps proper at their middle points. Fig. 3 is a bottom plan of a certain metal piece usually secured to one of the steps.

The set of steps constituting one part of the apparatus consists of the steps proper, A, carried by the usual side pieces B, which are held together by rods C and suitably braced to one or more of the steps. The other part, or the device for supporting the set of steps in an inclined position, consists of a simple cross formed by securing a cross-bar E to a rod D at a short distance from the upper end of the latter, which serves as a supporting-leg and when in operative position makes about the usual angle with the set of steps. The parts are so proportioned that when the bar D is in proper operative position it extends from rear to front through the set of steps, its upper end resting against the front edge of the step next above it and the arms of the cross-bar resting against the rear edges of the two side pieces B, respectively. The set of steps and the devices which sustain it are then mutally supporting, and would still be so were the bar D moved over against either side piece B, provided that the arms of the cross-bar were long enough to permit it, for the supporting device meets the steps at points not exactly opposite and therefore grips or cramps them with a force that increases with the weight upon the steps. When the weight of a person is applied upon the steps, the two parts become temporarily a very rigid whole. Above the steps proper the side pieces B are bent inward until they meet in the medial line of the structure and are united in any suitable manner—for example, by metal clip H. This construction greatly facilitates the use of the device in gathering fruit, since the pointed end forces its way among thick branches without catching upon or unnecessarily displacing them.

When a single bar D is used, as shown, it is desirable that it be kept nearly in the middle of the steps, and to this end the front edge of the proper step is notched to receive it, and the notch is preferably lined with metal F, secured to the step in any convenient manner. By taking hold of both parts the apparatus may be moved from place to place as a whole quite as easily as the usual forms of step-ladder, and yet the set of steps is always ready for use entirely without attachments, like a simple ladder, and in many other ways—as, for example, in adapting itself to uneven ground—the apparatus has great practical advantages.

For the special use suggested the species of the invention selected for illustration has advantages over other forms, but it is obvious that other forms are within the spirit of the invention, and I do not therefore wish to limit myself to the forms set forth, but

What I claim is—

1. The combination with a normally-inclined set of steps, of a support adapted to pass obliquely through said set between its steps and to grip it by biting against its opposite sides at points not exactly opposite, when

force tends to lessen the angle made by the steps and support.

2. The combination with a normally-inclined set of steps, of a support resting against the front edge of a step, passing rearwardly downward through the set, and provided below the rear edge of said step with lateral projections adapted to rest against the rear edges of the side pieces of said set, substantially as set forth.

3. The combination with the normally-inclined set of steps, of the supporting-bar making an acute angle with the set and having its upper end resting against the front of the step next above it, and the cross-bar fixed to said bar in position to meet the rear edges of the side pieces of said set when the bar is in proper supporting position.

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

WALTER PRICE.

Witnesses:

THEO. F. JOHNSON,

P. D. VAUGHAN.