

(No Model.)

J. J. BALDWIN.  
STEP LADDER.

No. 283,555.

Patented Aug. 21, 1883.

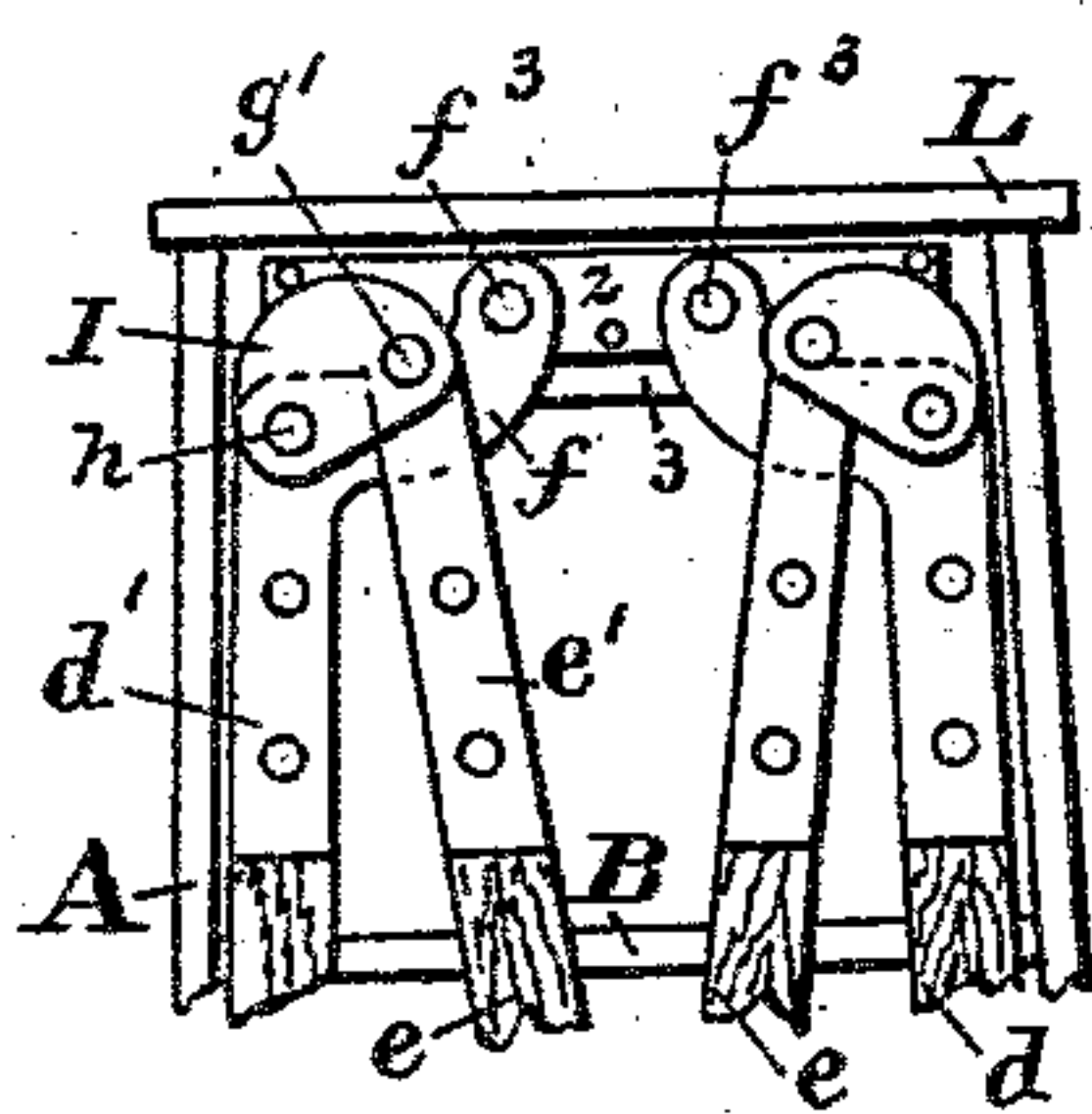


Fig. 2.

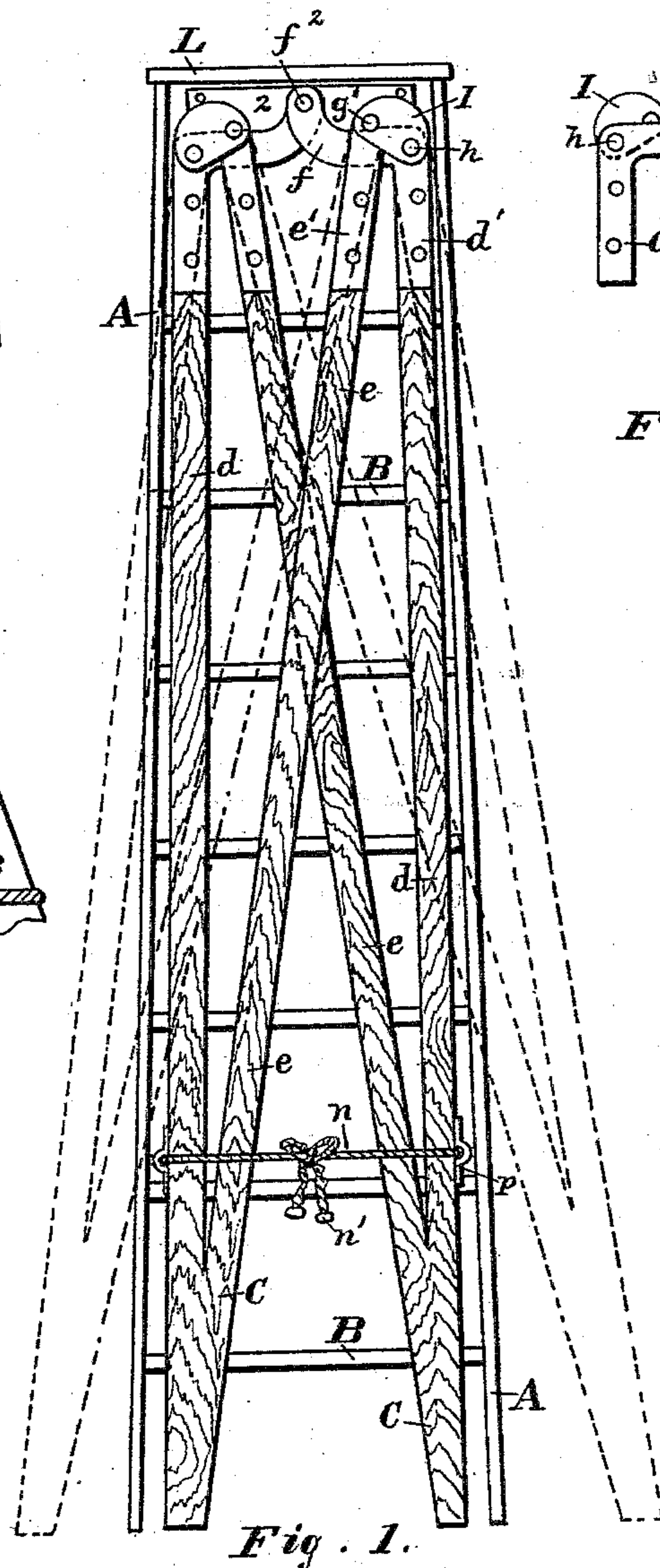


Fig. 1.

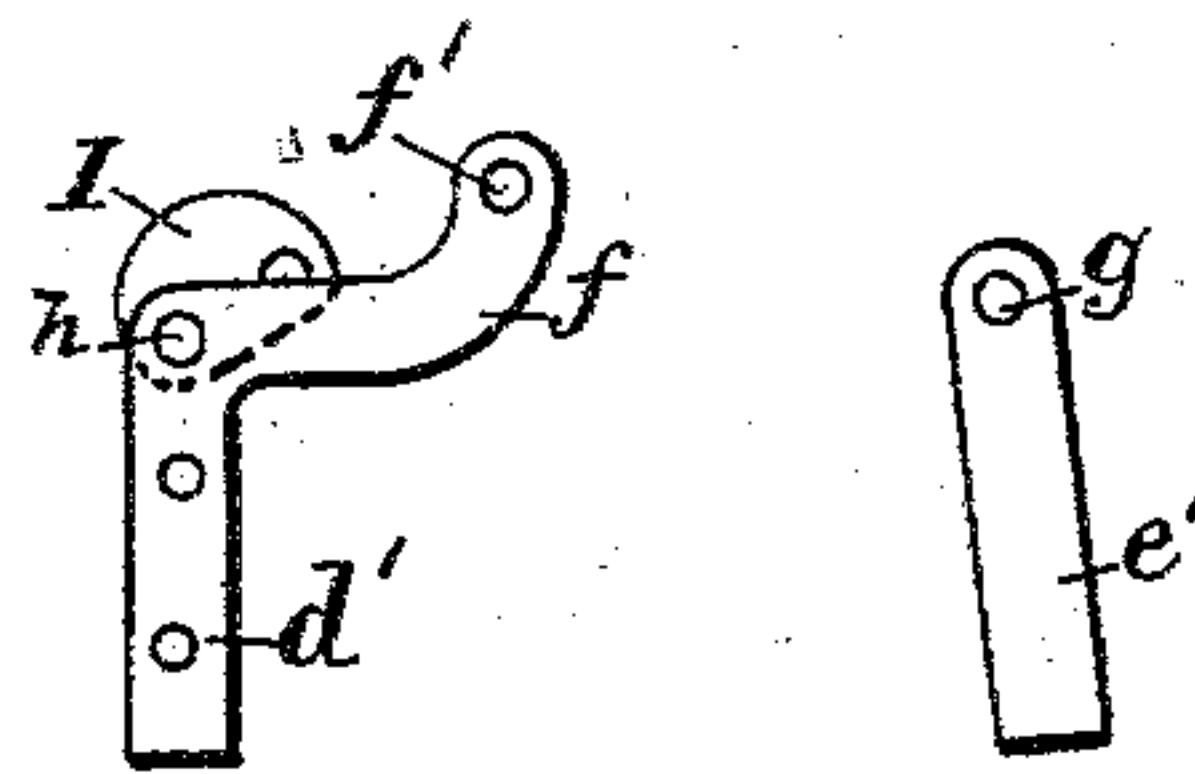


Fig. 3. Fig. 4.

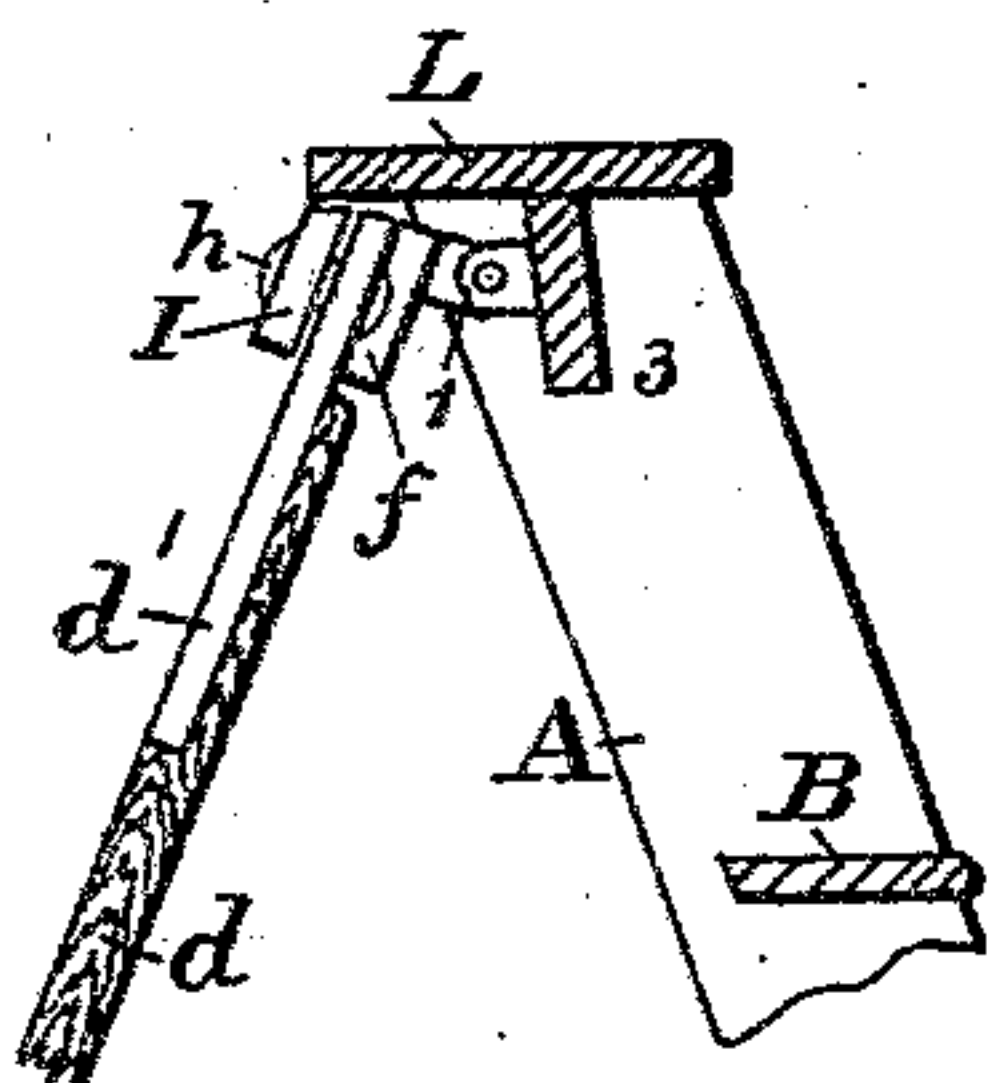


Fig. 6.

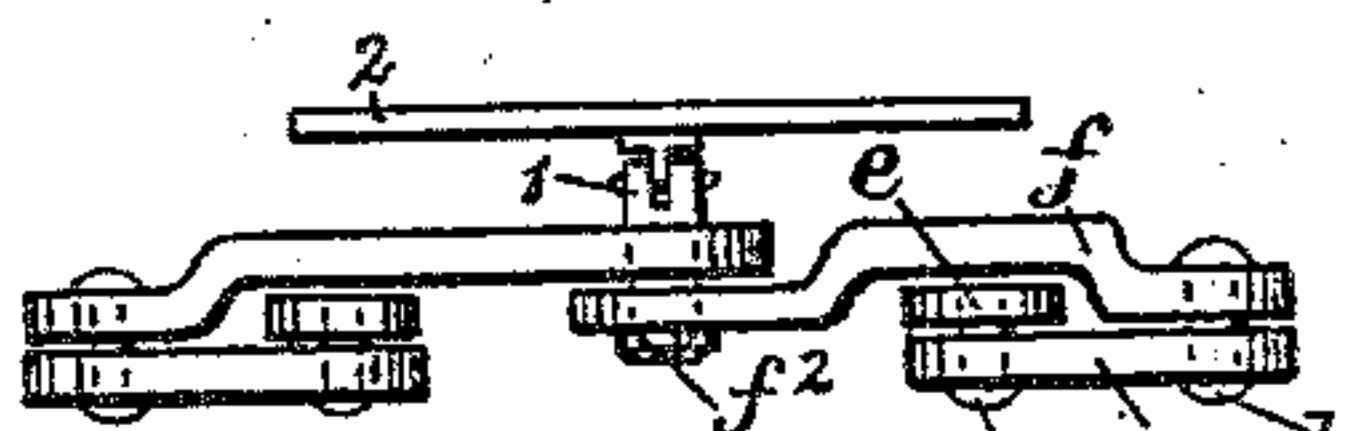


Fig. 5. g' I h

Witnesses:  
A. C. Eader  
John E. Morris.

Inventor:  
Joseph J. Baldwin  
By Chas B. Mann  
Attorney.



# UNITED STATES PATENT OFFICE.

JOSEPH J. BALDWIN, OF BALTIMORE, MARYLAND.

## STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 283,555, dated August 21, 1883.

Application filed April 18, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH J. BALDWIN, a citizen of the United States, residing at Baltimore and State of Maryland, have invented certain new and useful Improvements in Step-Ladders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in step-ladders, and has for its object to provide an improved means for connecting the supporting-legs to the ladder, whereby, when the ladder is set up and the legs opened to support it, the two legs may be spread apart laterally to give a more stable support, especially for high ladders.

The construction and operation of my improvement will first be described and the invention will then be claimed.

In the drawings hereto annexed, Figure 1 is a rear view of the step-ladder. Fig. 2 is a like view of the top part, showing a modification. Fig. 3 is a view of one of the angle-irons. Fig. 4 is a view of one of the straight irons. Fig. 5 is a top view of the hinged or jointed bolt which allows the legs to open. Fig. 6 is a sectional side view of the top part.

The letter A designates the side bars, and B the steps or ladder, of usual construction. The legs C have two branches, *d e*, at their upper ends. An iron, *d'*, having two edges, which form, substantially, a right angle, is attached by one part of the angle to the branch *d* of the leg, and the other part of the angle has an upward curve, *f*, provided at its extremity with a pivot-hole, *f'*. Another iron, *e'*, is straight, and is attached to the branch *e* of the leg. The extremity of this iron has a pivot-hole, *g*. Both legs C have their branches provided alike with these irons.

The upward-curved part *f* of the two right-angled irons *d'* may be pivoted on one bolt, *f<sup>2</sup>*, as seen in Fig. 1, and thereby have a common pivoting-point, whereby the legs may be spread apart; or each of these irons may be separately pivoted on different bolts, *f<sup>3</sup>*, as seen in Fig. 2, and thereby have independent pivoting-points, either construction affording in the main the same result. The bolt to which the upward-curved irons *f* are pivoted has a joint, 1, (see Fig. 5,) and a plate, 2, by which it is

attached to the cross-bar 3. This joint serves as a hinge to allow the legs to be opened away from the ladder. I do not, however, limit myself to this construction, as a hinge may be otherwise arranged.

The irons *d'* being pivoted at the upper or top end of the ladder, the branch *d* of each leg may, when the legs are closed against the ladder, extend straight along and on the inner side of the side bars, A, as shown; or said branches may lie flat against the rear edge of the side bars.

The diagonally-extended branches *e* of the two legs cross each other, and the iron *e'* of each branch *e* approaches the right-angled iron *d'* of the branch *d* of the other leg. A top curved plate, I, has one corner, *g'*, pivoted to the extremity of the straight iron *e'*, and the other corner, *h*, pivoted near the angle of the iron *d'*, and thus this plate connects the branch *e* of one leg with the branch *d* of the other. The curved edge of this plate is uppermost. By this arrangement and combination of the two legs either of the legs may be moved laterally independent of the other, or both may be moved.

The top platform, L, of the ladder projects, as usual, to the rear, and when the legs are opened (that is, away from the ladder) the top curved edge of the connecting-plate I comes in contact with the under side of the top platform, and serves as a bearing for the upper ends of the legs. This top curved connecting-plate is an important feature, therefore, as by it the pivoted upper ends of the legs may always have a bearing against the top platform, no matter whether the two legs be spread apart much or little.

I deem the formation of each leg into two branches as the most desirable; but instead of each leg having two long branches, the diagonal branch *e* may be dispensed with, and two straight legs (like *d*) may each have at its upper end a metal bar or arm to extend horizontally across, and the extremity of the arm of one leg pivoted to the corner *g'* of the top curved plate of the other leg. By this I mean that the top curved connecting-plate may be used on legs whose upper ends are pivoted, whether each of the legs have two long branches or not.



Cords *n* are employed to restrict the legs from opening too far away from the ladder. Each leg is provided with an eye, *p*, through which the cord may pass freely. One end of the cord is attached to the side bar, and the cord passes through the eye on the leg, and has at its end a knot, *n'*. When the legs are closed against the ladder, the two cords may be drawn through the eyes and then tied together, as shown in Fig. 1, to hold the legs to the ladder.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A step-ladder having two legs, each provided with two branches, *d e*, one extending straight and the other diagonally, the straight branch of each leg having its end pivoted and

the diagonally - extended branches crossing each other, and the upper end of one connected to the upper end of the straight branch of the other by a pivoted connecting-plate, and means to restrict the spread of the legs, as set forth.

2. In a step-ladder, the combination, with a top platform, *L*, and two legs pivoted to the ladder, of top curved plates, *I*, to connect the two legs, and adapted to bear against the under side of the top platform, and means to restrict the spread of the legs, as set forth.

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

JOSEPH J. BALDWIN.

Witnesses:

JNO. T. MADDOX,  
JOHN E. MORRIS.