No. 848,513. PATENTED MAR. 26, 1907.

M. E. TRAFTON.

STEP LADDER.

APPLICATION FILED JAN. 29, 1906.

Fig. 1

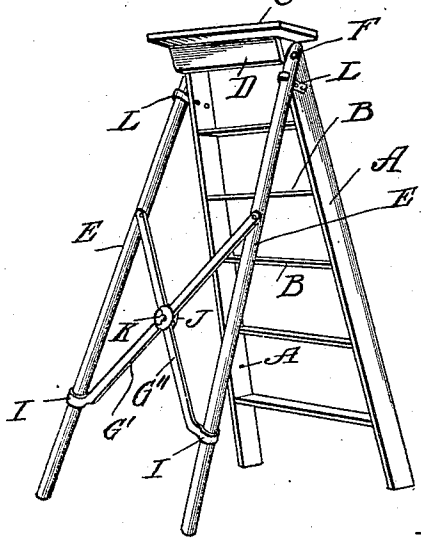


Fig. 2

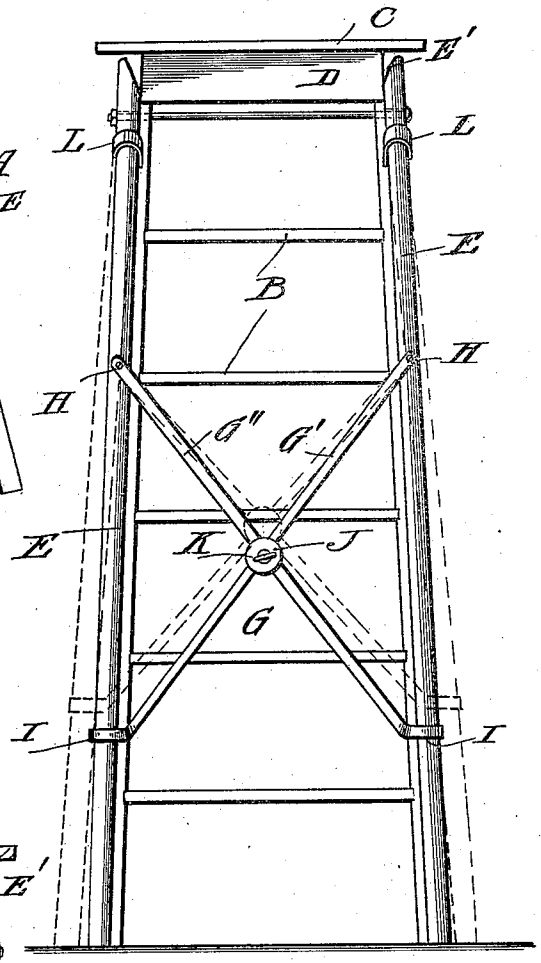


Fig. 3

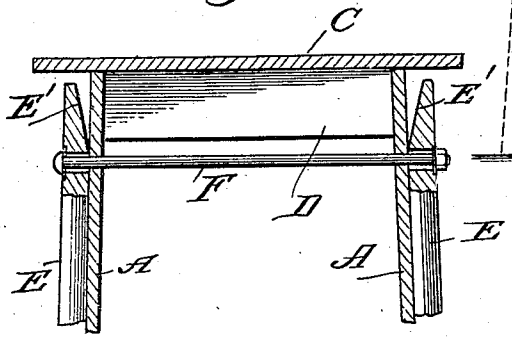


Fig. 4

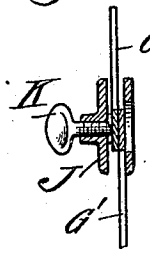
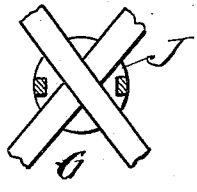


Fig. 5



Witnesses

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STEP-LADDER.

No. 848,513. Specification of Letters Patent. Patented March 26, 1907.

Application filed January 29, 1906. Serial No. 298,524.

To all whom it may concern:

Be it known that I, MATHEW E. TRAFTON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Step - Ladders, of which the following is a specification.

The object of my invention is to provide a simple step-ladder having great strength and rigidity, and thereby obviate the insecure feeling one has while standing on the usual step-ladder, which in large measure prevents the use of same, and at same time provide a ladder not liable to break or fall down when in use. I accomplish this object by means of the device described herein and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a step-ladder embodying my invention in position for use. Fig. 2 is a rear view thereof, the supporting-struts being shown in full lines in their compact or folded position for transportation and shown in dotted lines in their spread-out position for use. Fig. 3 is a fragmentary central vertical section of the top of the ladder. Figs. 4 and 5 are enlarged details of the cross-brace-securing clamp.

A represents the usual upright supports, upon and between which the steps B are secured in the usual manner. The usual top platform C is secured to the cross-piece D in the usual manner. The struts E are pivotally secured to the top of the upright supports by the usual pintle-bolt F. These struts are adapted to be thrown into a spread-out position, as shown in dotted lines in Fig. 2, and afford great rigidity and steadiness to the ladder when in use. To allow the struts to be thrown outwardly into their extended position, I have caused the upper end of the struts to be chamfered, as at E′, Fig. 3, and the opening through these struts through which the pintle-bolt F passes is larger than the pintle-bolt, giving ample play to spread out the bottom ends of the supporting-struts. To hold these struts in rigid position when spread outwardly, I have provided a cross-brace G, having two members G′ and G″ crossing each other in the center, as shown, and secured at their upper ends on the back side of the supporting-struts by screws H. These cross-braces are provided at their lower ends with strut-receiving loops I to receive the lower end of the supporting-struts. To lock these cross-braces in any secured spread-out position, I have provided a movable clamp J. It is provided with an opening therethrough for the passage of the cross-braces and has a screw-threaded opening leading to the brace-receiving slot in the clamp, adapted to receive a set-screw K, by means of which these cross-braces can be locked in any position desired.

My improved ladder when desired for use is thrown into the position shown in Fig. 1, the thumb-screw K is unscrewed, releasing the members G′ and G″ of their frictional engagement with themselves and the clamp, the loops I are elevated, throwing the lower ends of the supporting-struts into any desired extended position. When the struts have been thrown outwardly into the desired position, the thumb-screw K is screwed up tightly, locking the cross-braces together and imparting great strength and rigidity to the supporting-struts in the desired spread-out position. Rigidly secured to the upright supports I have provided a pair of strut-engaging hooks L, secured close to the top thereof and below the pivotal point, where the supporting-struts are pivoted to the upright supports. These hooks will impart additional strength and rigidity to the ladder and limit the spread which may be given to the bottom of the upright support and the supporting-struts.

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

In a step-ladder, supporting-uprights having strut-engaging hooks rigidly secured thereto; cylindrical supporting-struts chamfered on their inner upper ends pivotally secured to said uprights; cross-braces having their upper ends pivotally secured to the supporting-struts and having on their lower ends loops adapted to slidingly engage said struts; a locking-clamp carried by the cross-braces at their point of crossing; and a set-screw carried by said locking-clamp adapted to hold the cross-braces in frictional engagement.

In witness that I claim the foregoing I have hereunto subscribed my name this 22d day of January, 1906.

MATHEW E. TRAFTON.

Witnesses:

HENRY T. HAZARD,

G. E. HARPHAM.