

A. W. & J. E. WALKER.
Extension Step-Ladders.

No. 137,040.

Patented March 18, 1873.

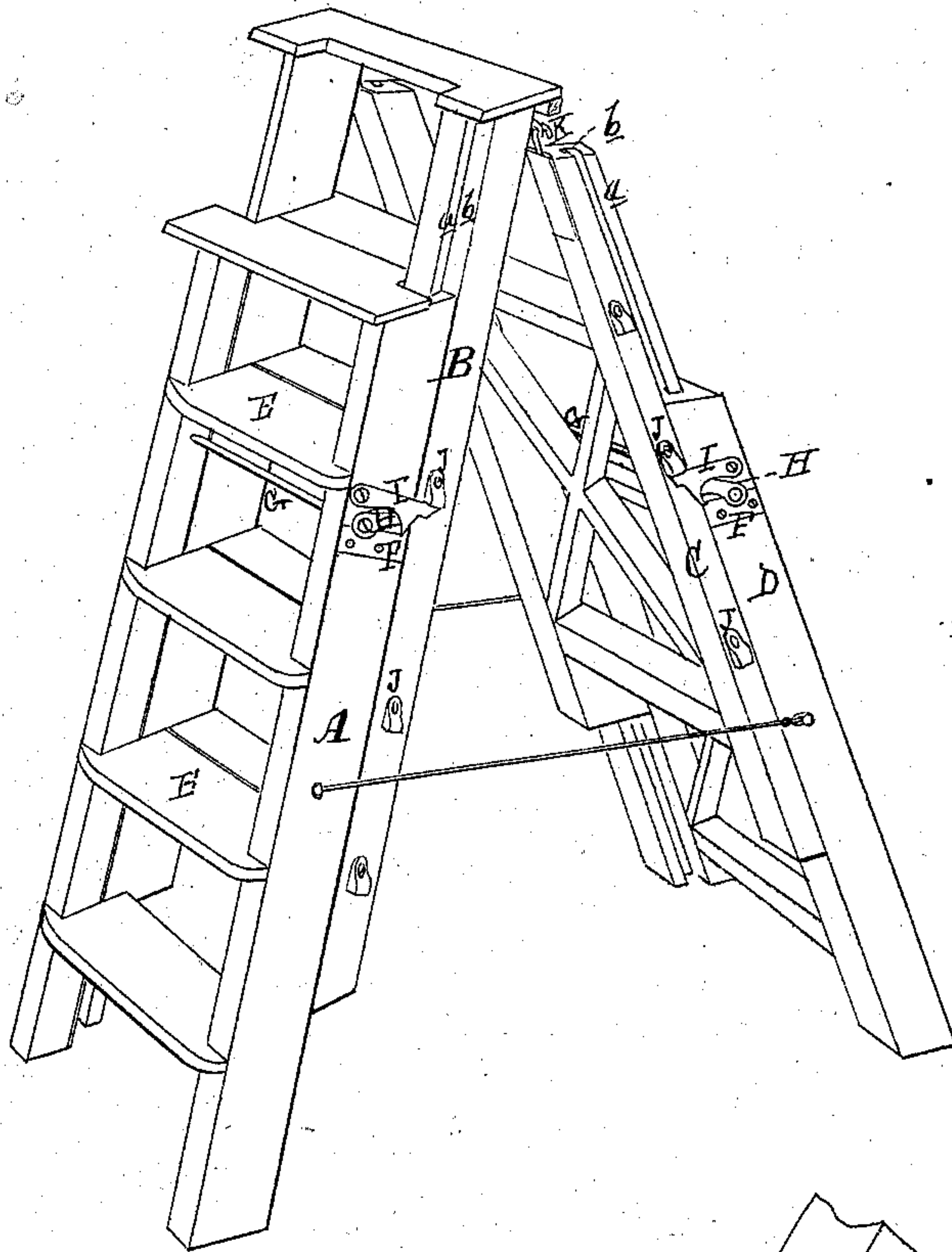


Fig. 1.

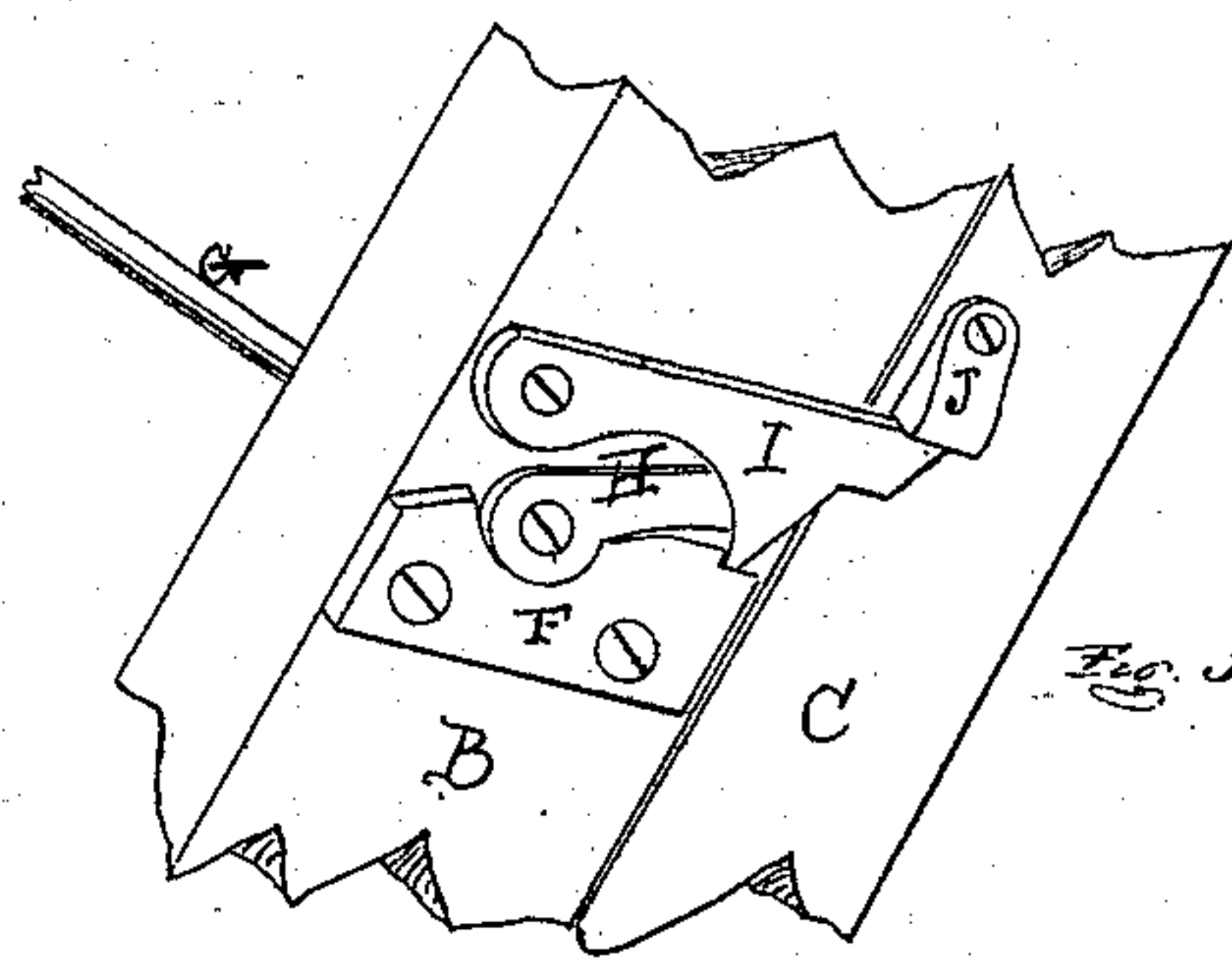


Fig. 3.

Fig. 2.



ATTEST:

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IMPROVEMENT IN EXTENSION STEP-LADDERS.

Specification forming part of Letters Patent No. 137,040, dated March 18, 1873.

To all whom it may concern:

Be it known that we, ANCIL W. WALKER and JAMES E. WALKER, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Extension and Adjustable Step-Ladders; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective of our improved ladder partially extended. Fig. 2 is a cross-section, showing the manner in which the side rails and legs of the ladder are secured together in their reciprocal movement. Fig. 3 is an enlarged view of the latch by means of which the side rails and legs are secured when extended.

The nature of this invention relates to the construction of a ladder which may be used as such, or as a step-ladder, capable of being extended in either case, that will be strong, simple in construction, economical, and durable. The invention consists in the construction of the latch by means of which the side rails and legs are secured when extended, and in the arrangement of the various parts, as more fully hereinafter described.

In the accompanying drawing, A represents the side rails of the ladder, and B the side rails of the extension thereof. D are the legs, and C the leg extensions. These side rails are connected together by means of a tongue, *a*, and groove *b*, on each, the tongue and groove on the side rail A engaging with a similar tongue and groove on the extension rail B, as shown in Fig. 2. The leg D, and extension C thereof, are secured together in the same manner. Between these side rails A and extensions B thereof are secured the steps E in such a manner that when the parts are not extended the steps in each will be on the same plane, forming a wide and secure step. F is a resistance-plate, one of which is secured to each

of the side rails A and legs D. A rod, G, passes through the side rails A and legs D, and to each end of these rods are rigidly secured the buttons H. Just above these buttons are pivoted the latches or arms I, the inner ends of which project beyond the inner edges of the side rails and legs to which they are attached. J are rigid stops secured to the parts B and C. The extension parts B and C are secured at their top ends by means of hooks and staples K in such a manner that the legs may be removed easily, at will, so that the ladder may be used without the legs. Should it be desired to extend the ladder, the side rails B are extended upward, sliding in the grooves hereinbefore described until the desired extension is obtained, when the rigid stops J will rest upon the projection of the latches or arms I, thereby holding the side rails A B in their position. These rigid stops are arranged at such distances apart as will bring the steps opposite to and coincident with each other in both the ladder and extension. The extension of the legs is produced by like means.

When it is desired to close the extension the rod G is turned so that the buttons rigidly secured to its ends will raise the latches or arms from their engagement with the stops, when the extension may be closed.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In combination with the rails A B the rod G, buttons H, latches or arms I, and stops J, substantially as described, and for the purposes set forth.

2. The combination of the side rails A B, legs C D, steps E, hooks and staples K, substantially as described, and for the purposes set forth.

ANCIL W. WALKER.
JAMES E. WALKER.

Witnesses:

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