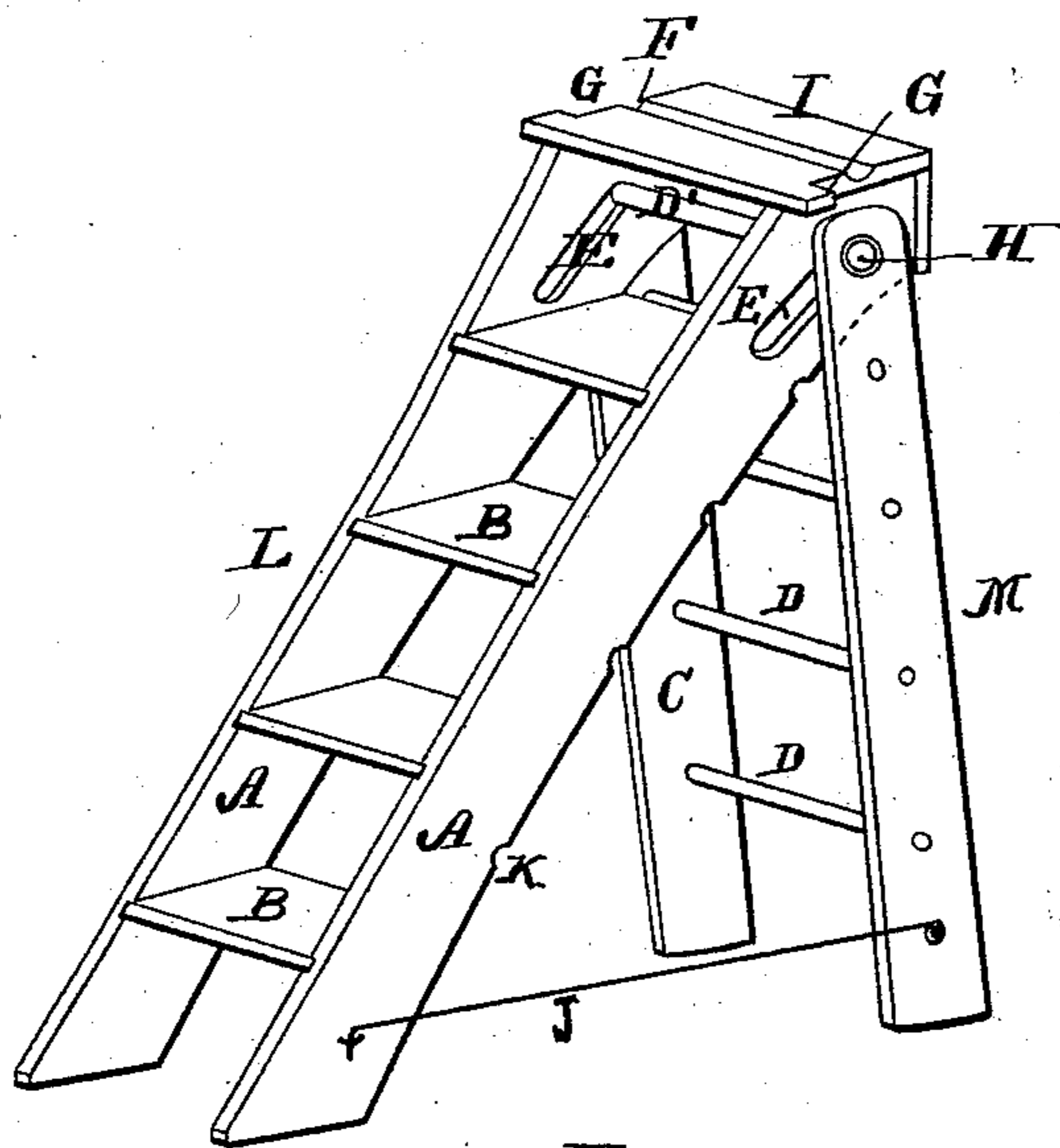


(No Model.)

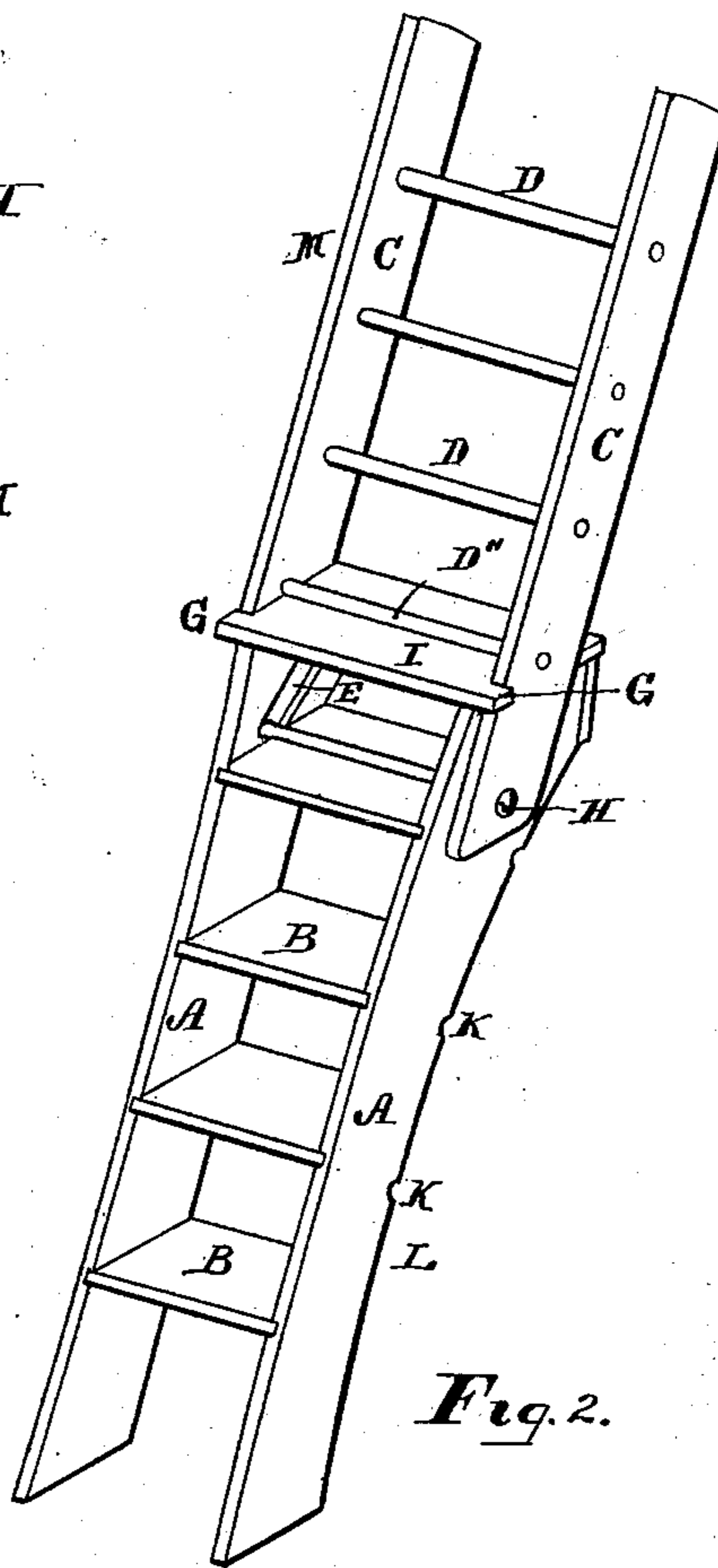
T. L. VANDERSLICE.  
EXTENSION STEP LADDER.

No. 349,189.

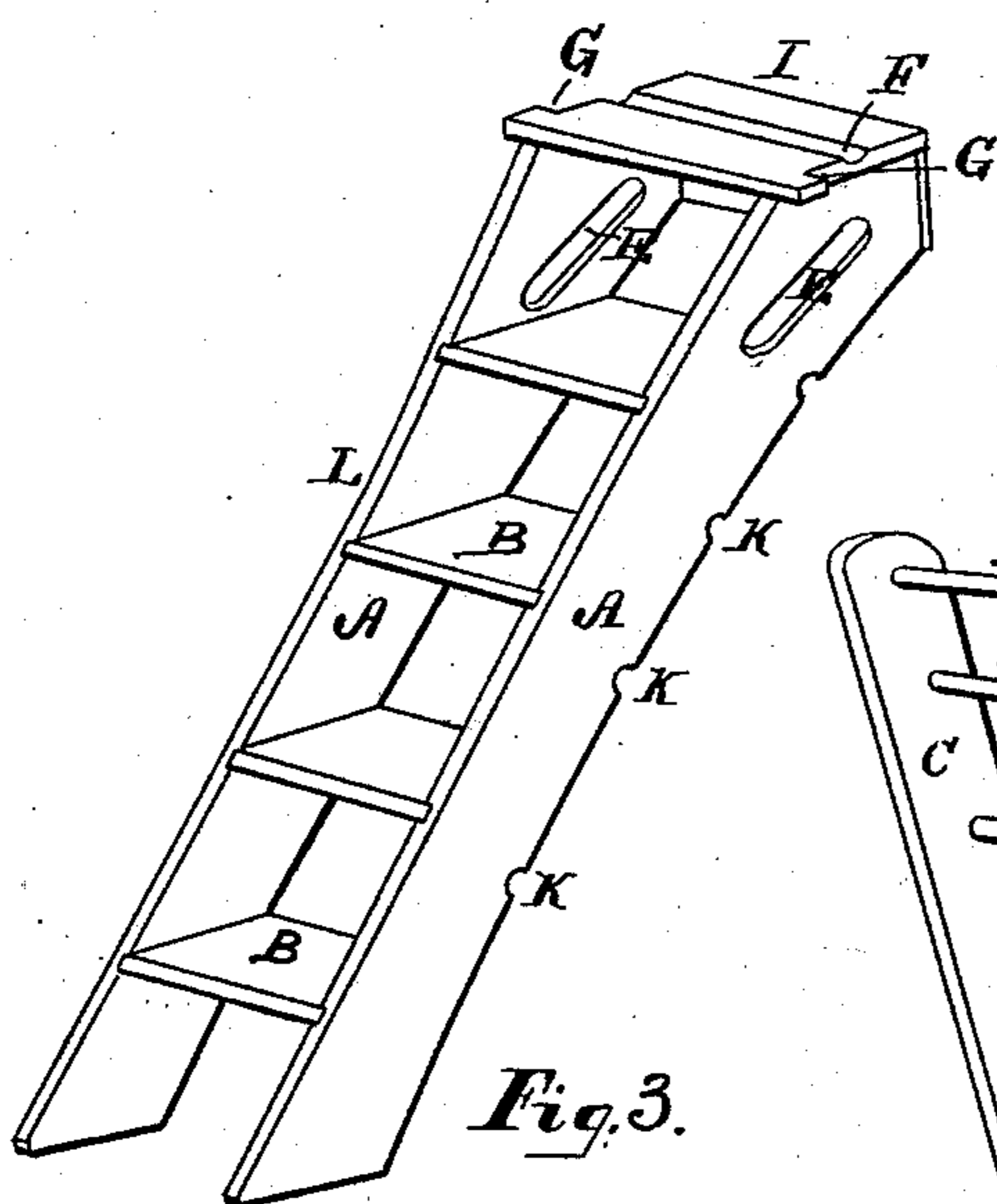
Patented Sept. 14, 1886.



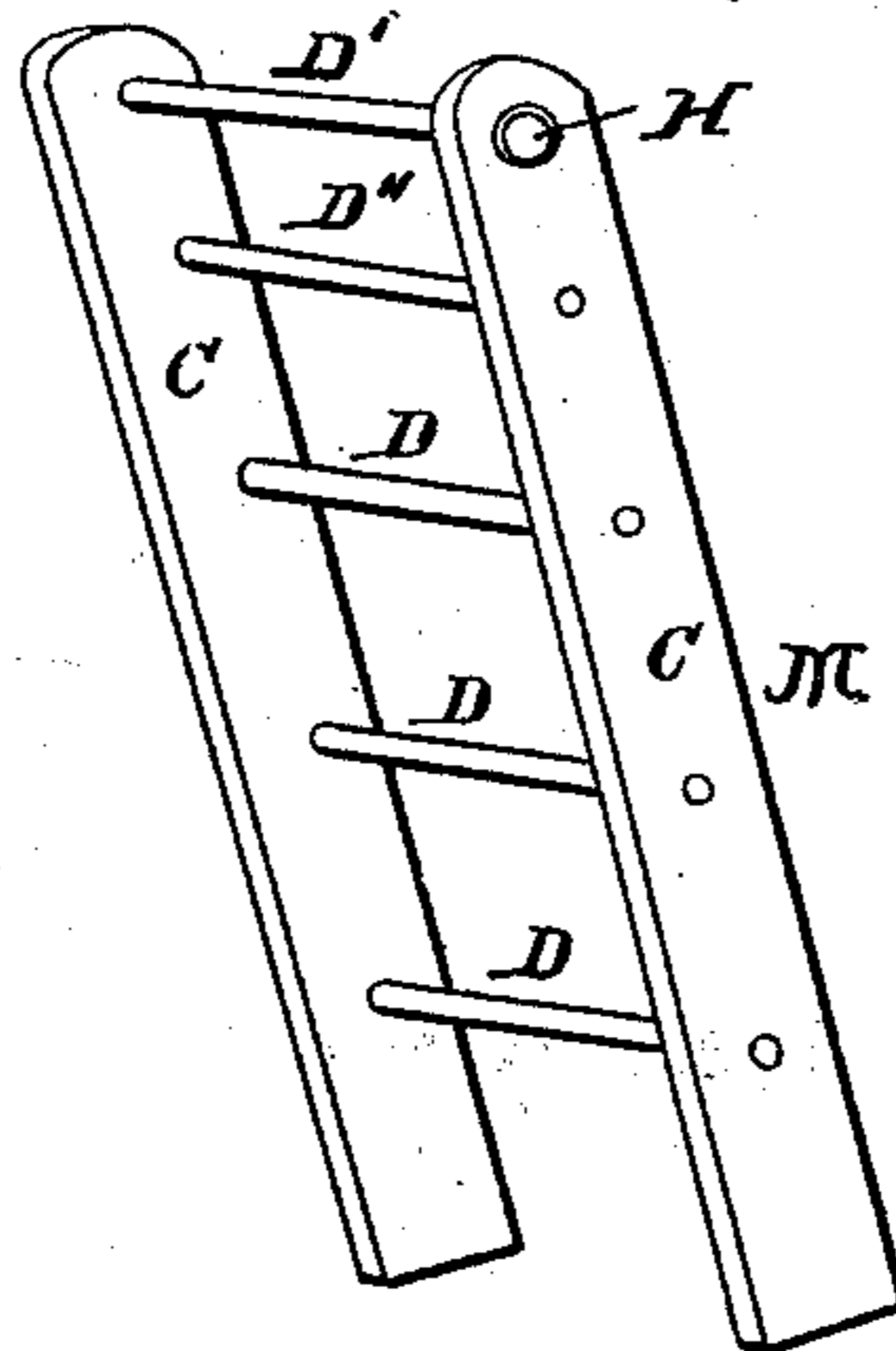
*Fig. 1*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

WITNESSES:

J. H. R. Storey  
Fred C. Simon

INVENTOR

Thomas L. Vanderslice  
by his attorney  
Thad. L. Vanderslice

# UNITED STATES PATENT OFFICE.

THOMAS L. VANDERSLICE, OF PHILADELPHIA, PENNSYLVANIA.

## EXTENSION STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 349,189, dated September 14, 1886.

Application filed April 1, 1886. Serial No. 197,378. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS L. VANDERSLICE, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented a new and Improved Extension Step-Ladder, of which the following is a specification.

The object of my invention is to provide a durable, strong, convenient, and cheap extension step-ladder, and one which can be separated into two parts, whereby the brace part of the step-ladder may be used as an independent ladder separate from the main ladder.

In the drawings, Figure 1 is a perspective view of the device when ready for use as a step-ladder. Fig. 2 is a perspective view of the device when used as an extension-ladder. Figs. 3 and 4 are perspective views of the two main parts of the step-ladder when detached from each other and ready for use as separate ladders.

A A are the sides of the main step-ladder; B B, the steps thereof; C C, the bars forming the sides of the brace part of the ladder, and D D' D'' the rungs or rounds thereof. These sides C C are pivoted to the main sides A A by the detachable rung or round D'. The ends of the sides C C are on the outside of the main sides A A, and the round D' passes through the slots E E in the latter. This round D' is provided with a head, H.

F is a long half-round groove in the top of the platform I, in which the round or rung D' rests when the ladder is extended. (See Fig. 2.)

The side bars, A A, flare apart at their lower ends, as well as the bars C C, to properly brace the ladder and to avoid tilting; and the usual rod, J, is used to prevent spreading, or a rope or chain may be used for this purpose.

G G are projections or shoulders on the platform I, against which the bars C C sit when the ladder is extended.

The operation is as follows: As an ordinary step-ladder, it is used in the form as shown in Fig. 1. If it is desired to lengthen or extend the ladder, the brace part of the ladder is thrown up, as shown in Fig. 2, and the part thus turned up settles down until the round D' rests in the bottom of the slot E E, the round D'' in the groove F, and the upper edges of the bars C C

against the shoulders G G, which act as stops, as shown. The extended ladder is now ready for use, and is nearly twice the length or height of the step-ladder. If, on the other hand, two workmen each need to use a short ladder, the round D' is drawn out by its head H, and the two parts are thus disconnected. The round D' is then replaced, and becomes the top round of the ladder, as shown in Fig. 4, and the two independent ladders are ready for use.

The slots E E, as shown in the drawings, are straight; but they may be cut on a curve, flat S-shaped, or with one part of the slot at an angle with the other part, as it may suit the fancy or convenience of the builder.

An ordinary pin may be used to pierce the end of the round D', to hold it securely in place and to prevent it working out. K K are half-round notches cut in the under edges of the sides A A, adapted to receive the rounds D D'' of the brace-bars C C, thus making the step-ladder close compactly, and more convenient to handle and transport.

In my claims I shall designate the main part or section of the step-ladder by the letter L and the bracing part or second section by the letter M, to avoid verbiage.

The groove F, which receives the round D'', acts as a rest for it, and a stay to the part M when the ladder is extended.

I am well aware that extension step-ladders have heretofore been patented; but I do not broadly claim the invention of an extension step-ladder.

What I do claim is—

1. In an extension step-ladder, the combination of main part L, the sides A A of which are pierced near their upper ends by openings or slots E E, and brace part M, the upper round, D', of which is loose and removable, and adapted to pierce the sides A A through openings or slots E E, thus forming a pivotal pin, and also permitting the parts L and M to be detached from each other, substantially as and for the purpose described.

2. In an extension step-ladder, the combination of the main part L, the sides A A of which are pierced near their upper ends by openings E E, brace part M, the upper round, D', of which pierces the sides A A through said openings E E, thus forming a pivotal pin,

and shoulder G, to form a stop to stay the extended section or part M, substantially as and for the purpose described.

3. In an extension step-ladder, the combination of the main part L, the sides A A of which are pierced near their upper ends by openings or slots E E, and the upper step or platform, I, of which is provided with a groove, F, to receive the round D" of the part M, to

stay the ladder when extended, and brace part M, the upper pivotal pin, D', of which pierces the sides A A through the said openings E E, substantially as and for the purpose described.

THOMAS L. VANDERSLICE.

Witnesses:

E. L. CLARK,

GEORGE E. BUCKLEY.