

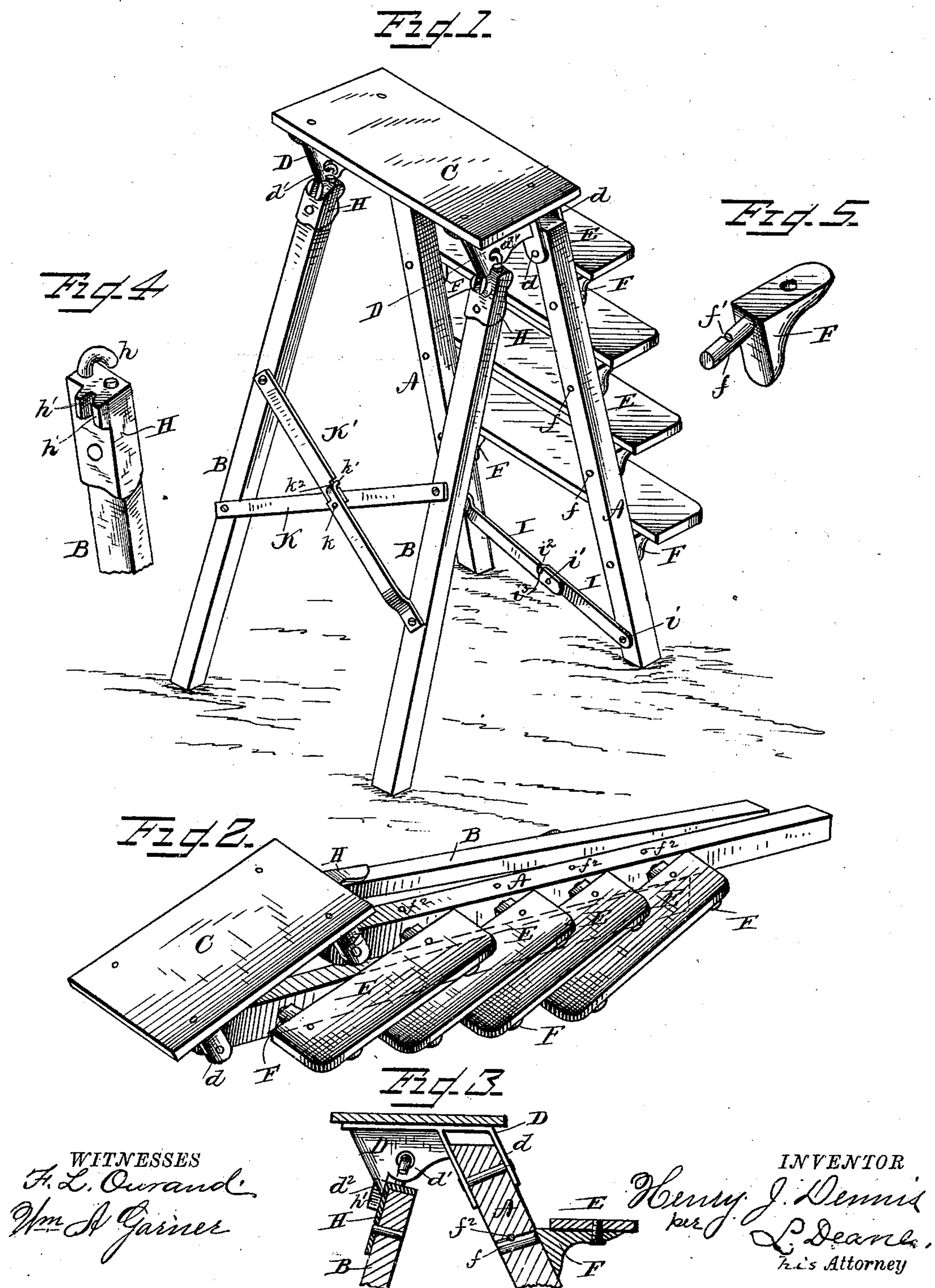
(No Model.)

H. J. DENNIS.

STEP LADDER.

No. 273,474.

Patented Mar. 6, 1883.



UNITED STATES PATENT OFFICE.

HENRY J. DENNIS, OF HASTINGS, MINNESOTA.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 273,474, dated March 6, 1883.

Application filed November 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. DENNIS, a citizen of the United States, residing at Hastings, in the county of Dakota and State of Minnesota, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of this device, showing it extended as for use. Fig. 2 is a perspective view, showing it folded; Figs. 3 and 4, details to show how the legs are hinged; Fig. 5, detail to show the step-bracket.

This invention is an improvement in step-ladders; and the points of novelty relate generally to the means for locking or stopping the outstretched legs, to the step-bracket, to the peculiar construction of the device whereby it is folded, and to the general detail of the construction and combination of several parts, all as will now be more fully set out and explained, reference being had to the accompanying drawings—

In these drawings, A denotes the front legs, B the rear legs, and C the cap or top step. The main legs A are pivoted at their upper ends in the lips *b* of the metal casting D, which is secured by screws or otherwise to the under side of the cap or top step C. Said legs are provided with steps E, which are supported on brackets F. Each of these is a metal casting, on the body of which an end of the step may be secured by screws or otherwise. Each of said brackets has also a shank, *f*, which passes from front to rear through one of the legs A. In said shank is a notch, *f'*. When the shank is in aforesaid position it will be secured by a pin, *f*², thrust through the side of A and resting in notch *f'* of the shank. By this construction the steps can be swung on the shanks *f* when the front or main legs are moved for folding or unfolding.

The rear legs, B, swing on the hooks *h* of the upward end of the castings H, fixed to the top of the legs. These hooks engage in holes *d'* in the under side of the casting D, and between

the lips *d* and the rear gib or downwardly-depending spur *d*². On the back of the casting H are shoulders *h'* *h'*. When the legs B are swung backward the spur or gib *d*² will come between the shoulders *h'* *h'*, and thus make a stop for the rear legs. As this spur *d*² is central on said casting, it is evident that the strain on it will be even.

The braces I on the rear of the front legs will turn on pivots *i* and joint *i'* as the legs swing, and can be locked, when the legs are outstretched for use, by catch *i*² and socket *i*³. Likewise the cross-braces K K' on the rear legs are pivoted at *k*, and can freely swing with the rear legs. K is made of one piece, and K' is jointed at *k*, and has catch and socket *k'* *k*², to fasten it when the legs are outstretched.

The details of using this device are so clear from the above description that they need not now be detailed.

The ladder can be readily opened and locked in position for use, or unlocked and folded for storage or transportation.

The device is cheap, compact, and strong, and consequently a very desirable one for household and store use.

I claim—

1. In a step-ladder as described, the combination of the casting D, having lips *d*, hole *d'*, and gib *d*², and casting H, having hook *h* and shoulder *h'*, substantially as set forth.

2. The step E and bracket F, having shank *f*, notched at *f'*, combined with leg A and pin *f*², substantially as set forth and described.

3. In a step-ladder, the hinged and swinging front and rear legs, A and B, steps E, and bracket F, constructed and combined as set forth.

4. The front legs, A, having steps E, adapted to fold, and hinged braces I, provided with catch and socket, combined with cap C, castings D and H, and rear legs, B, having braces K and K', provided with catch and socket, substantially as described.

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

HENRY J. DENNIS.

Witnesses:

CHARLES CLURE,

OSCEOLA O. BUCKELEW.