

M. N. LOVELL.
Extension Ladders.

No. 153,716.

Patented Aug. 4, 1874.

Fig 1

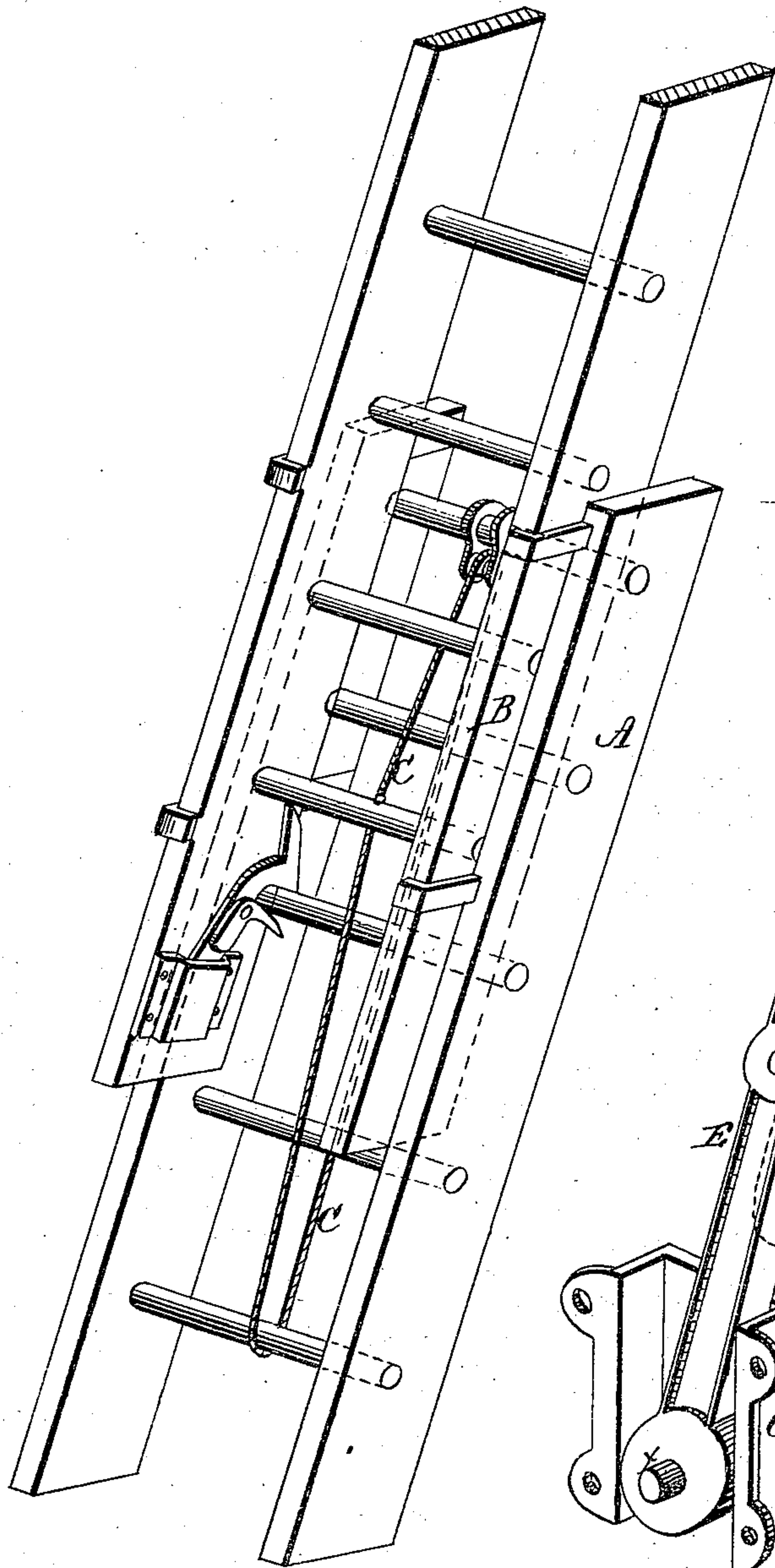
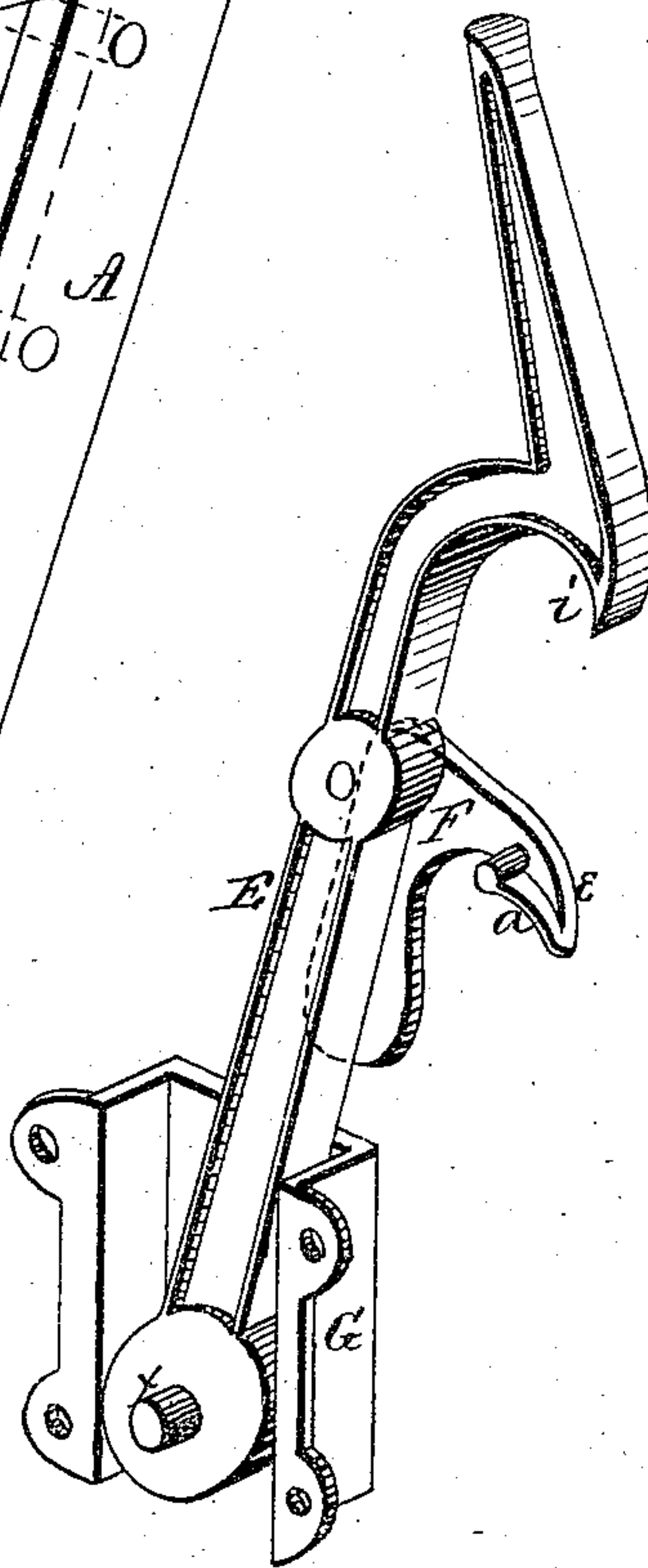


Fig 2



WITNESSES

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MELVIN N. LOVELL, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN EXTENSION-LADDERS.

Specification forming part of Letters Patent No. **153,716**, dated August 4, 1874; application filed June 18, 1874.

To all whom it may concern:

Be it known that I, MELVIN N. LOVELL, of Erie, in the county of Erie and in the State of Pennsylvania, have invented certain new and useful Improvements in Extension-Ladder; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the peculiar construction and arrangement of a device to be used with extension-ladders, for locking and holding them in position, as will be hereinafter set forth.

In the annexed drawings, Figure 1 is a perspective of two ladders partially extended, and Fig. 2 is a perspective view of the locking device taken from the inner face.

In the figures, A and B represent two ladders, one made a little narrower than the other, so that the narrow one can lie and slide upon the rounds of the wider one. C represents a rope which has both of its ends made fast to the lowest round of one ladder after having passed over or around the lowest round of the other ladder, and then through a pulley-block on the highest round of same. The locking device consists of a hooked arm, E, a bell-crank, F, and the metal box G. One end of the arm E is pivoted, as seen at *x* in the box G. Two of these boxes are used with the inner ladder, and secured to it, as seen, near its lower end. The hook *i* upon the arm is intended to catch upon the rounds of the larger ladder, and thus hold the two at any desired position. The point *e* of the bell-

crank F reaches a little beyond the point of the hook *i*, and the other end of said crank being heavier the two points are kept in contact, except when the crank is moved by coming in contact with the rounds. Upon the inner side of the crank F is formed a rib or flange, *a*, so that when the point *e* is struck and moved backward by the round the flange will come in contact with the arm E and allow it to move only so far. This flange prevents any displacement of the crank, and assures its proper working. The arm E plays upon its pivot sufficiently to rise over and drop upon the rounds in its operation. When the ladder B is dropped, the point *e* resting against the point of the hook *i*, prevents said hook from catching the round, and the arm E passes over the rounds with ease.

I do not claim the vertically pivoted and hooked lever, having a pawl or lever pivoted thereto, without the employment of the flange or rib upon the inner face of the bell-crank lever F.

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

The flange *a* on the weighted bell-crank lever F, in combination with the arm E and box G, as constructed, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of May, 1874.

MELVIN N. LOVELL.

Witnesses:

JNO. K. HALLOCK,
ROBERT H. PORTER.