

No. 728,650.

PATENTED MAY 19, 1903.

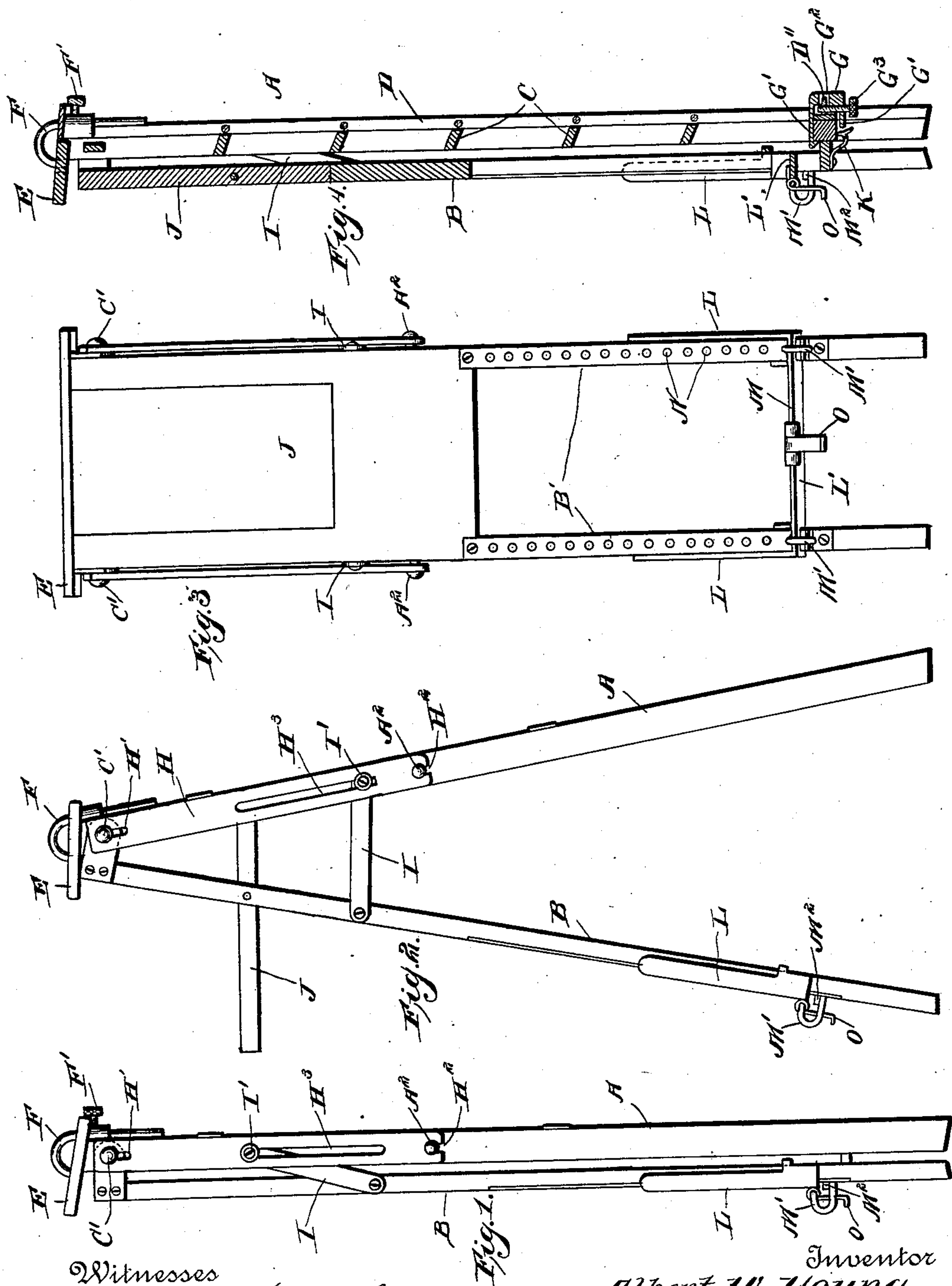
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COMBINED EXTENSION STEP LADDER AND WINDOW JACK.

APPLICATION FILED APR. 4, 1902.

2 SHEETS—SHEET 1.

NO MODEL.



Witnesses  
Louis D. Heinrichs  
L. H. Morrison

Inventor  
Albert W. Young  
By his Attorney  
W. Preston Williamson

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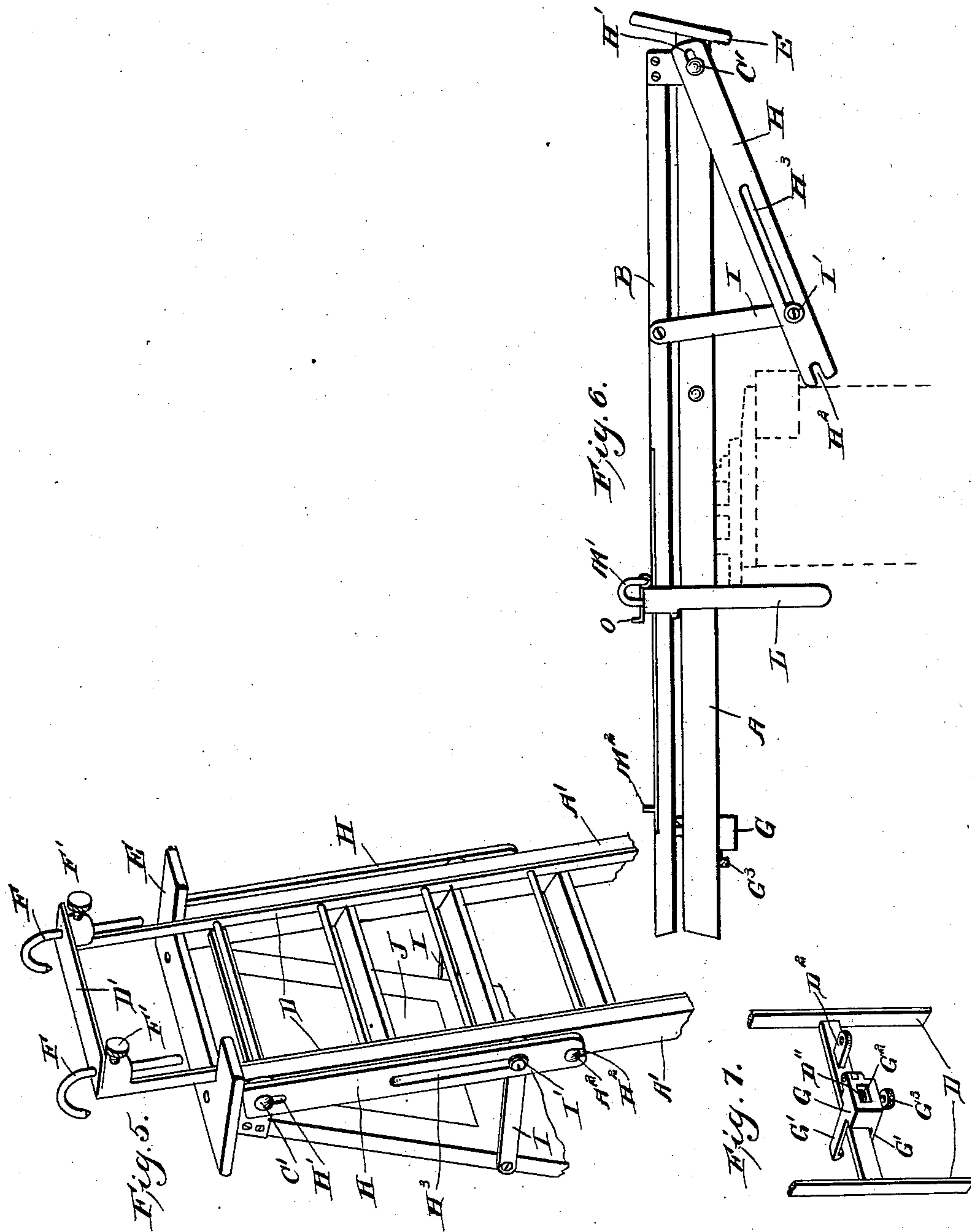
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# UNITED STATES PATENT OFFICE.

ALBERT W. YOUNG, OF PHILADELPHIA, PENNSYLVANIA.

## COMBINED EXTENSION STEP-LADDER AND WINDOW-JACK.

SPECIFICATION forming part of Letters Patent No. 728,650, dated May 19, 1903.

Application filed April 4, 1902. Serial No. 101,302. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT W. YOUNG, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in a Combined Extension Step-Ladder and Window-Jack, of which the following is a specification.

My invention relates to a new and useful improvement in a combined extension step-ladder and window-jack, and has for its object to so construct an apparatus of this description which can be used as an ordinary step-ladder, and said step-ladder contains a supplementary ladder which may be extended above the step-ladder, and then by folding the ladder can be converted into a window-jack.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the apparatus folded; Fig. 2, a side elevation of the step-ladder in position; Fig. 3, a rear elevation of the step-ladder; Fig. 4, a vertical longitudinal section of the step-ladder; Fig. 5, a perspective view of the upper portion of the step-ladder, showing the supplementary ladder raised slightly above the top platform of the step-ladder; Fig. 6, a side elevation of the apparatus, showing it in use as a window-jack; Fig. 7, a perspective view of the lower portion of the supplementary ladder, showing the catch for securing the ladder in place.

In the drawings, A and B represent the two members or legs of the step-ladder, which are pivoted together, as usual, at the top at the point C'. The member A consists of the side strips A', and C represents the usual flat step-ladder steps secured between these side strips, but these side strips are wider than the steps, and that portion of the side strips extending forward of the steps is formed into

a guideway for the purpose of guiding the supplementary ladder D. This is simply a straight ladder having rungs extending between the side strips at intervals, and the steps of this supplementary ladder lie within the guideways of the side strips A'. The side pieces of this supplementary ladder D are joined together at the top by the flat plate D', which when the ladder is in its normal position completes the platform E of the step-ladder, a portion of this platform being cut away to allow for the raising of the supplementary ladder, and the plate D' fits in this cut-away portion when the extension-ladder is in its normal position. The ladder D may be provided at its upper end also with the adjustable hooks F, which may be hooked over a cornice or any other place to steady the ladder when extended. These hooks may be adjusted by the set-screws F'.

The lower rung of the ladder D instead of being made round is preferably made flat and has hinged to it the latch G, which has the upper and lower arms G' extending rearward from the same, and when the latch is in the position shown in Fig. 7 these upper and lower arms are adapted to straddle the lower rung of the ladder D and also one of the steps C of the step-ladder. The ladder D may be slid upward to any height and secured to any one of the steps C, so as to hold the ladder from descending. The latch G has an opening G<sup>2</sup> formed through it and threaded through the under side of the latch, and extending upward into the opening is a set-screw G<sup>3</sup>, which is adapted to be screwed into a hole formed through an ear D'', which ear extends outward from the lower rung of the ladder D. This is for the purpose of holding the latch in position. When the latch is thrown back for the purpose of raising the lever D, the opening G<sup>2</sup> will then register with a second ear D<sup>2</sup>, also secured to the lower rung of the ladder, and by means of the set-screw G<sup>3</sup> the latch may be held in this open position.

Upon each side of the member A of the step-ladder is arranged a strip H. This strip H is pivoted at its upper end to the pivot C' at the same point as the two members A and B are pivoted together; but at the point where the strips H are pivoted a short slot H' is



formed through it. The pivot extends so that the strips H will have a slight vertical movement relative to the member A. At the lower end of the strip a notch H<sup>2</sup> is formed, which is adapted to fit over a pin A<sup>2</sup>, extending outward from each side of the member A. Thus when the strips H are in their normal position they will lie parallel with the member A. These strips H are also slotted, as indicated at H<sup>3</sup>, and to each side of the member B are pivoted braces I, the forward ends of which are provided with pins or studs I', which work in the slots H<sup>3</sup>. These braces I are for the purpose of holding the step-ladder in its extended position, as shown in Fig. 2; but when the step-ladder is folded the braces resume the position shown in Fig. 1.

The member B is provided with a pivoted platform J, which when the step-ladder is extended may be turned down in the position shown in Fig. 2, so that the forward end of the platform will strike the under side of the top step C of the step-ladder, and upon the rearward end of the platform a pail of water, paint-pot, or other article could be held; but when the platform J is folded it lies flush with the member B, as shown in Fig. 4.

When this apparatus is designed to be used as a window-jack, the members A and B are folded together and secured by the latch K, as shown in Fig. 4. Then the strips H are raised slightly, so as to disengage their ends from the pins A<sup>2</sup>, and the ladder is turned in a horizontal position with the member B upward and pushed through the window, and then the strips H are swung downward, as shown in Fig. 6, the braces I serving as braces also for these strips, and the ends of the strips H will abut against the outside of the building, and then the two arms L, which slide upon the side strips B' of the member B, are carried forward until they abut against the window-sill upon the inside of the room and then are secured in place. Thus a window-jack is formed which cannot tilt or become unfastened, the upper portion of the member B, including the platform A, serving as a platform for the painter or other person using the jack.

The arms L may be caused to slide along the side strips B' in any manner desired, and in the drawings I have shown these arms joined together above the strips by the cross-piece L', and pivoted to this cross-piece is the cross-rod M, which has hooks M' formed upon each end, which hooks are designed to enter holes N, provided in strips secured to the side strips B' of the member B. Thus the arms can be adjusted to any position. When the apparatus is not being used as a window-jack, the arms L may be swung parallel with the member B, as shown in Fig. 2, and the hooks M' may then be hooked over projections M<sup>2</sup>, as shown in Fig. 2, and thus hold the arms in position, a finger-piece O, secured to the center of the cross-rod M, serving as a means for manipulating the hooks M'. While I have

shown holes and hooks for holding these arms L in position, it is obvious that other means could be employed—such as a ratchet, for instance—without departing from the spirit of the invention.

The advantages of my invention are that by the combination of the three articles in one apparatus it will make a very convenient household article, but it will be especially convenient for painters, who now have to carry with them a step-ladder, a straight ladder, and a window-jack, while this apparatus may be converted into any one of the articles, and when folded will not occupy any more room than an ordinary step-ladder and may be manufactured at a comparatively small cost and be very durable and efficient in action, answering all the requirements to which the separate articles can be put.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a device of the character described, two members pivoted together at their upper ends, flat steps formed with one member, strips pivoted to each side of the step-ladder and adapted to answer as braces upon the outside of the window when the apparatus is used as a window-jack, arms so secured to the step-ladder as to normally lie parallel with one of the members, but when the device is used as a window-jack may be made to extend downward in a vertical line and contact the window-sill upon the inside of the room, said arms adapted to slide along the step-ladder, and means securing said arms in any position placed, as and for the purpose specified.

2. In an apparatus of the character described, a step-ladder consisting of a forward and rearward member pivoted together at their upper ends, each member consisting of side strips, flat steps secured between the side strips of the forward member, strips pivoted to the side of the step-ladder, means for holding said strips parallel with the forward member when the device is used as a ladder, said strips provided with slots, braces pivoted to the rearward member, pins or studs secured to the forward end of said braces and adapted to work in the slots of the strips, said strips adapted to be disengaged from the step-ladder and rocked downward upon its pivot and held by the braces when the apparatus is used as a window-jack, said strips adapted to contact the building upon the outside, arms slidably mounted upon the rearward member of the step-ladder, said arms adapted to be brought into contact with the window-sill upon the inside of the room when the device is used as a window-jack, and means for securing these arms in any position placed, substantially as and for the purpose specified.

3. The combination in a device of the char-



acter described, of a step-ladder consisting of forward and rearward members pivoted together at their upper ends, strips arranged upon the outside of the step-ladder and pivoted at the same point as the two members of the step-ladder, a slot provided in the upper end of each of the strips through which the pivot extends, a notch formed in the lower end of each of the strips, pins extending outward from the forward member of the step-ladder and adapted to be engaged by the notches in the strips so as to hold the strips parallel with the forward member when the device is used as a ladder, said strips also provided with slots, braces pivoted to the rearward member, pins or studs formed upon the forward end of said braces adapted to work in the slots of the strips, said strips adapted to be raised slightly so as to be disengaged from the pins, then rocked downward and held in position by the braces when

the device is used as a window-jack, the ends of the strips coming in contact with the outside of the building, arms slidably mounted upon the rear member of the step-ladder, said arms extending downward at right angles to the step-ladder when the device is used as a window-jack and adapted to come in contact with the window-sill upon the inside of the room, means for holding said arms in any position placed, said arms adapted to turn and be held parallel with the rearward member when the device is used as a ladder, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ALBERT W. YOUNG.

Witnesses:

J. RALPH PAXSON,  
L. W. MORRISON.