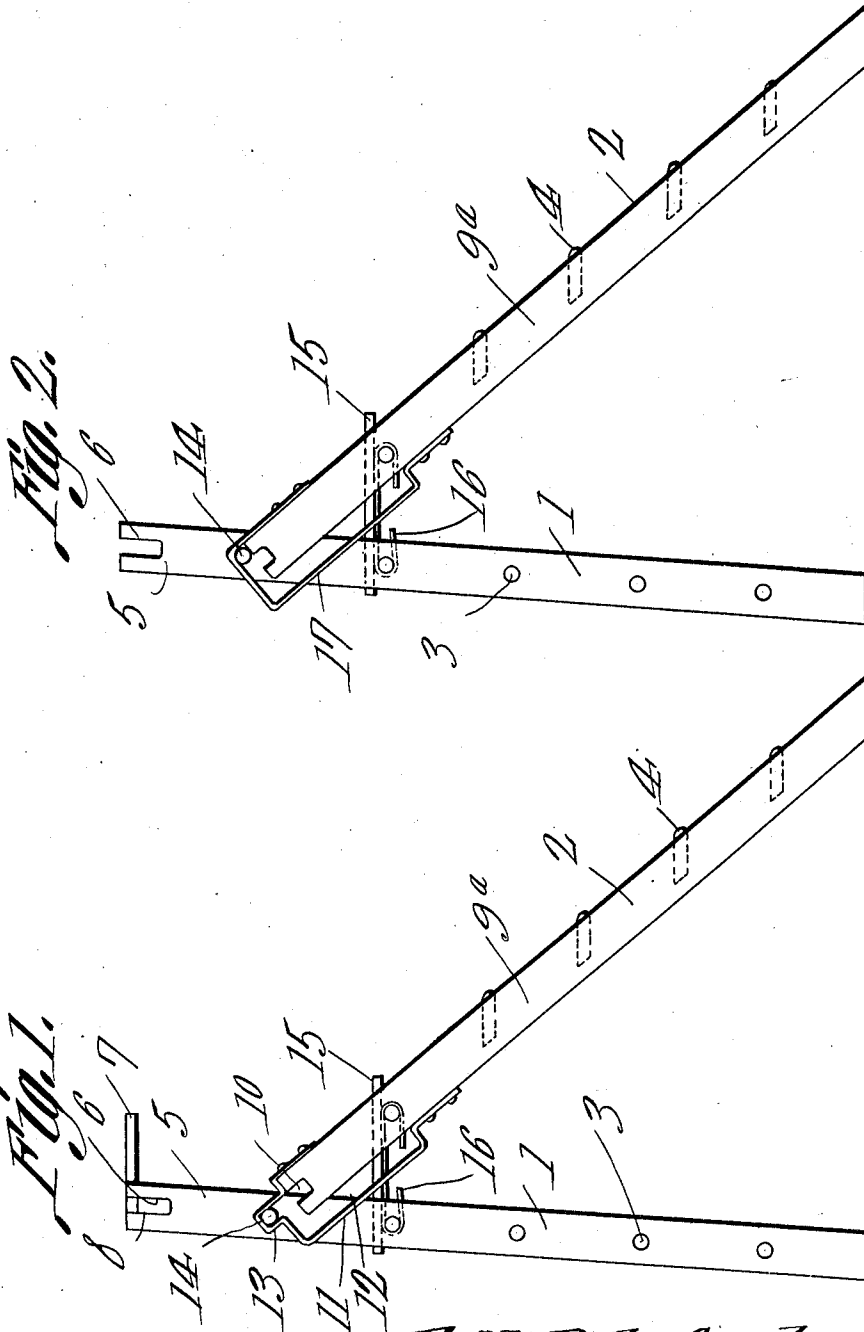


E. N. BOTSFORD.
 COMBINED STEP AND EXTENSION LADDER.
 APPLICATION FILED JUNE 3, 1911.

1,026,147.

Patented May 14, 1912.

2 SHEETS-SHEET 1.



Witnesses
J. H. Wilson
L. H. Wilson

E. N. Botsford,
 Inventor
 by *C. A. Snow & Co.*
 Attorneys

E. N. BOTSFORD.
 COMBINED STEP AND EXTENSION LADDER.
 APPLICATION FILED JUNE 3, 1911.

1,026,147.

Patented May 14, 1912.

2 SHEETS—SHEET 2.

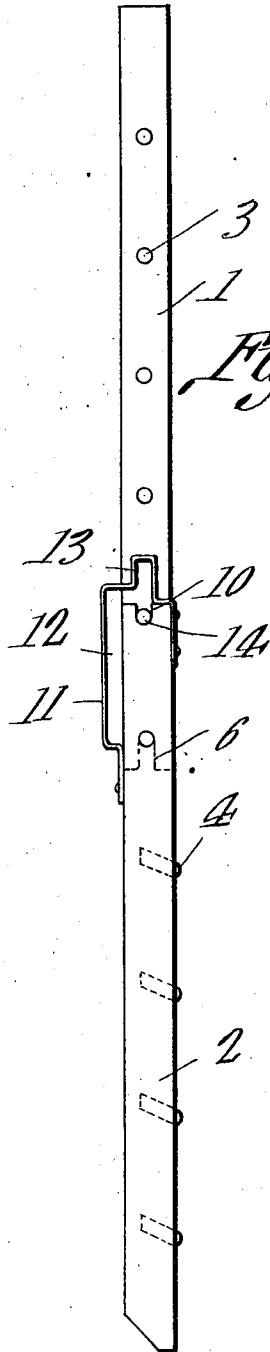


Fig. 5.

Fig. 3.

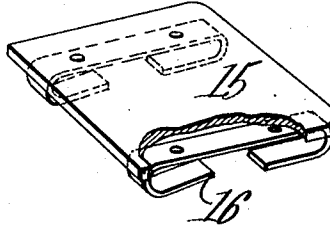


Fig. 4.

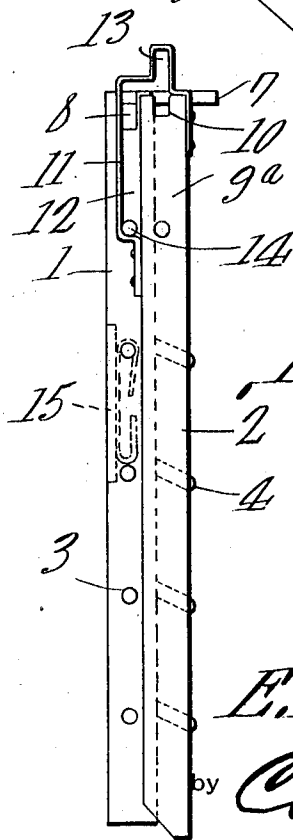
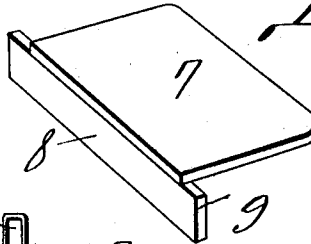


Fig. 6.

Witnesses

J. H. Wilson
L. H. Wilson

E. N. Botsford,
 Inventor

by *C. A. Brown & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

EUGENE N. BOTSFORD, OF PLATTEVILLE, WISCONSIN.

COMBINED STEP AND EXTENSION LADDER.

1,026,147.

Specification of Letters Patent.

Patented May 14, 1912.

Application filed June 3, 1911. Serial No. 630,983.

To all whom it may concern:

Be it known that I, EUGENE N. BOTSFORD, a citizen of the United States, residing at Platteville, in the county of Grant and State of Wisconsin, have invented a new and useful Combined Step and Extension Ladder, of which the following is a specification.

This invention relates to improvements in what may be termed step-ladders.

The invention has for its object to provide for readily effecting the conversion of the ladder according to the purpose or utility for which it may be in demand.

A further object is to adapt the device to serve not only as a platform or support for a pail or receptacle, but also to provide for suitably bracing the members in effective or retaining position.

A still further object is to adapt the device to serve as a truss or stay in forming or improvising a scaffold especially for use in a stair-way hall.

A still further object is to effect the conversion of the device into an extension ladder.

A still further object is to carry out the aforesaid ends in a simple, effective and expeditious manner.

The invention consists of certain instrumentalities and features substantially as hereinafter fully disclosed and defined by the claims.

In the accompanying drawing illustrating the preferred embodiment of my invention, wherein it will be understood that various changes and modifications may be made as relates to the detailed construction and arrangement of the parts without departing from the spirit of my invention,—Figure 1 is an elevational view of the ladder. Fig. 2 is also an elevational view thereof with its members slightly modified in construction and disposed or adjusted as when used in improvising a scaffold in a stair-way hall. Fig. 3 is a broken perspective of the coupling member or platform between the ladder sections or members. Fig. 4 is a detached perspective of the pail or receptacle support or platform. Fig. 5 is an elevational view disclosing the device as adapted to form an extension-ladder. Fig. 6 is a view showing the ladder sections in folded position.

In the disclosure of my invention, I employ suitably constructed ladder sections or members 1 and 2 of any suitable or desired

length, the step members of which may be either of the ordinary "rung" or rectangular type, each form 3 and 4 being herein disclosed.

The ladder-section 1 has its side rails 5 provided at or in their upper ends with opposed upwardly opening vertical slots 6 which are utilized in connection with securing a suitable pail or receptacle supporting platform 7 upon said ladder-section. Said platform has secured to its underside, at one edge, an edgewise disposed member or bar 8, whose ends suitably project for their reception within the slots 6 of the ladder section for the suitable retention of said platform in horizontal position when in use, especially as disclosed by Fig. 1. To provide for such reception of the platform or support intermediate the lateral portions or members of the ladder-section, the edgewise-arranged member or bar 8 is suitably extended or projected as at 9.

The ladder-section 2 has its side-rails 9^a provided in their upper ends also with upwardly opening slots 10, the function of which will presently appear. To the same ends of the side-rails of the ladder section are suitably applied or fixed metallic straps 11 forming loops 12. Said loops extend some distance parallel with the rear edges of the ladder-section side rails 9^a and upwardly beyond the side-rail ends, whence said loops are extended still farther upwardly but considerably narrowed or constricted as at 13 just opposite, and slightly distant from the upwardly opening slots 10 in the ends of the ladder-section side rails, the purpose of which will also be presently apparent.

The ladder-section 1 has its top rung or foot-engaged member extended laterally to form projections or studs 14 which are received by or engage initially the loops 12, and subsequently the upper end narrowed portion 13 of said loop under different conditions and for different purposes. For instance, with the ladder-sections disposed or arranged in the ordinary step-ladder form, as disclosed by Fig. 1, the studs or projections 14 of the ladder-section 1 will be received by, or engage the contracted loop extensions 13 of the ladder-section 2 and, as arranged when not in use, or folded it will be noted that said studs or projections will move down into the loops 12, finally engaging the bottoms or lower ends thereof. Also

when the ladder-sections are arranged in extended position, as disclosed by Fig. 5, in which case the ladder-section 1 is inverted, the slots 6 in the upper ends of the side rails 5 of said section are engaged with, or receive the top round or rung of the ladder-section 2 and the slots 10 in the upper ends of the side rails of the ladder-section 2 receive or are engaged by the lateral studs or projections 14 of the ladder-section 1, thus effectively securing said ladder-sections in aline- 10 ment or extended position as indicated.

When the parts or sections are in the ordinary step-ladder form or when the same 15 may be improvised for forming a scaffold, they are suitably coupled together and held in such position by means preferably of a member 15, which is or may be utilized as a standing platform, said member or platform 20 having upon its underside hooked brackets or lugs 16 adapted for suitable engagement with, or to take under opposed contiguous rounds or rungs of the ladder-sections, as disclosed by Figs. 1 and 2.

As disclosed by Fig. 2, loop-forming straps, designated, in this instance, as 17, are devoid of the extensions forming the contracted loops 13 of the loop-forming straps 11 of Fig. 1. The upper end portion of 30 each loop-forming strap or member 17 is spaced off or removed wholly from the corresponding end of each side rail of the ladder-section. This provides for the engagement of the studs 14 with the inner, upper 35 corner edges of the strap-forming members 17 for the suitable retention of the ladder-sections in desired relative position and at the same time enables the upper ends of the loop-forming straps to suitably furnish or 40 form supports for a member, as a plank, (not shown) as in improvising a scaffold, especially in a stair-way hall for a painter's or paper-hanger's use, as it is thought will be readily appreciated. In this connection it 45 is further stated that the plank-member, for which the ladder-sections are adapted to provide, as indicated, for intermediately supporting said plank-member, has one end braced against a step in the stair-way.

50 It is thought that it has been made clearly apparent from the foregoing description, taken in connection with the accompanying illustration or drawing, that my invention

is characterized for its exceeding simplicity, its several utilities or purposes for which it 55 may be appropriated, and its effectiveness, while it is readily applied or adjusted for the various utilities and is inexpensive of manufacture.

What is claimed is:—

60 1. In a combined step and extension ladder, including ladder-sections, one ladder section having loop-forming straps at their upper ends certain of the loops being parallel with the longitudinal edges of the side 65 rails of one ladder-section, said loops in continuation extending parallel with the upper ends of said side rails, and the other ladder-section being provided with lateral studs adapted to be received by said loops in both 70 their longitudinal and end portions.

2. In a combined step and extension ladder, including ladder-sections, one ladder-section having loop-forming straps applied 75 to the side rails thereof, the loops formed thereby in continuation ranging along the longitudinal edges and along the ends of said side rails, said loop-forming straps having additional or supplemental loops in 80 their upper forward end-portions, and the other ladder-section having lateral studs adapted for engagement with said loops.

3. In a combined step and extension ladder, including ladder-sections, one ladder 85 section having applied thereto loop-forming straps, the loops thereof ranging along the longitudinal and end portions of the side-rails of said ladder-section, said straps having supplemental loops in their upper forward 90 ends, the side-rails of said ladder-section being provided in their upper ends with upwardly opening slots, and the other ladder-section having in the upper ends of their 95 side-rails upwardly opening slots, said side-rails having lateral studs engaging the first-referred to slots, the latter-referred to slots receiving a rung of the opposite ladder-section, said loops all being in continuation.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature 100 in the presence of two witnesses.

EUGENE N. BOTSFORD.

Witnesses:

H. J. LOFTSGORDON,
MILO C. HAGAN.