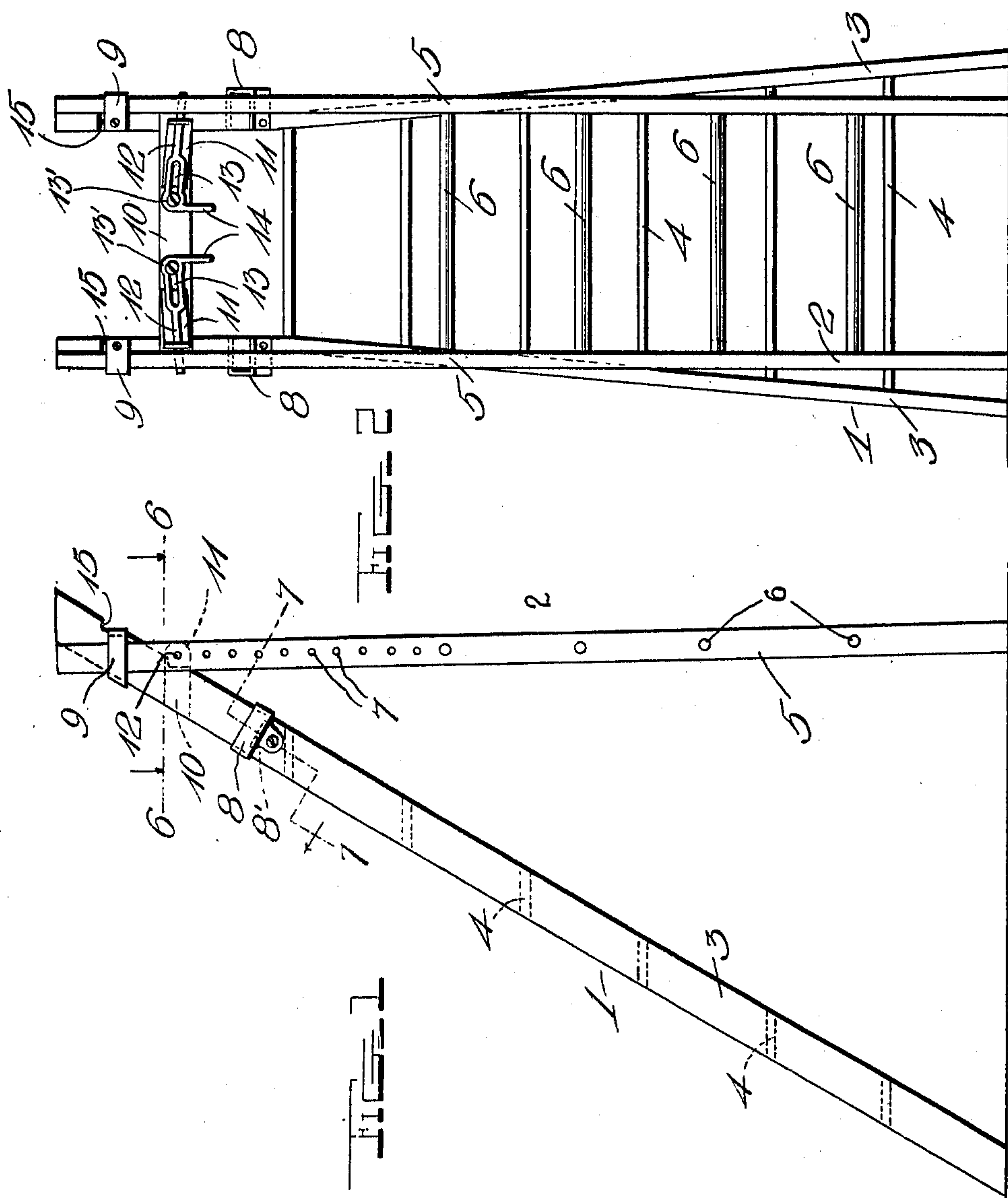


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COMBINATION LADDER.  
APPLICATION FILED OCT. 11, 1909.

992,051.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



Witnesses

*C. H. Griesbauer.*

Inventor

*Frank Petrie*

by *A. B. Wilson & Co.*

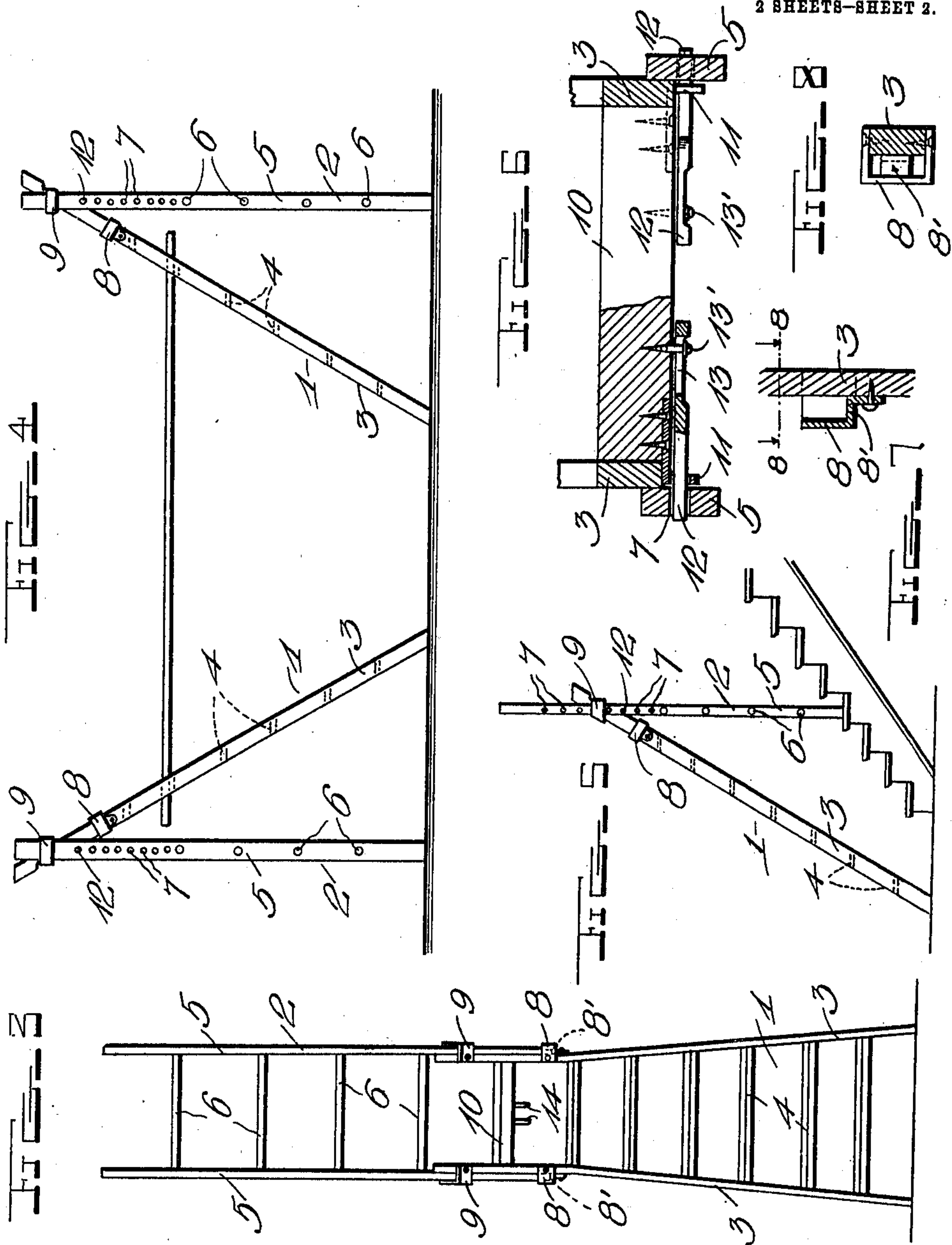
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# UNITED STATES PATENT OFFICE.

FRANK PETRIE, OF OKLAHOMA, OKLAHOMA.

## COMBINATION-LADDER.

992,051.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed October 11, 1909. Serial No. 522,026.

*To all whom it may concern:*

Be it known that I, FRANK PETRIE, a citizen of the United States, residing at Oklahoma city, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Combination-Ladders; and I do 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.

This invention relates to combination ladders, and particularly to that type which are adapted to be converted from step ladders into extension ladders or into scaffold supports, stair-cases or the like.

The object of the invention is the provision of a device of this character which may be cheaply constructed and which will take the place of three or more devices.

A further object of the invention is the provision of such a device which may be readily and conveniently converted from one device to another and held in such position adjustably.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation of the device, shown arranged as a step ladder; Fig. 2 is a rear elevation of the same; Fig. 3 is an elevation of the device, showing the same arranged as an extension ladder; Fig. 4 is an elevation, showing the use of a pair of ladders utilized as a paperhanger's scaffold supports; Fig. 5 shows the device arranged as a stair-case; Fig. 6 is an enlarged detail sectional view on the line 6—6 of Fig. 1; Fig. 7 is an enlarged section on the line 7—7 of Fig. 1; Fig. 8 is a transverse section on the line 8—8 of Fig. 7.

Referring more especially to the drawings, 1 and 2 represent separate sections, the former of which consists of the side members 3 and the bridged steps 4, while the latter consists of the side members 5 and the bridging rungs 6. The upper portion of this latter section is free of the rungs and has its side members provided with a plurality of apertures adapted to coact with other parts

carried by the section 1 to adjust the same, as will be hereinafter described. Each side member of the section 1 is provided with a socket member 8, which, in this instance, is formed with a base piece 8' and the upper portion of the side members are provided with stirrups 9 which are seated in suitable notches 15 formed on the rear of the side members so that their forward ends depend slightly and their attached portions are in position to receive the side members 5 of the section 2.

Intermediate the socket members and the stirrups 9 and arranged between the side members 3 of the section 1, is a bridge piece 10 upon which at opposite ends thereof are supported the guiding plates 11, in which the locking bolts 12 are adapted to slide. The inner ends of these bolts are slotted at 13 so as to receive the limiting bolts 13' and their inner ends are provided with downwardly extending finger grips 14 by which the bolts may be manipulated. When the device is in the position shown at Fig. 1, the bolts 12 are projected through certain of the apertures 7 in the side members 5 and thus the device is held in adjusted position to be used as a step ladder. When using the device as an extension ladder, as shown in Fig. 3, the bolts are retracted and the ladder up-ended so that the upper end of the side members 5 may be passed through the stirrups 9 so as to seat in the sockets 8. The device shown in Figs. 4 and 5, is used in a similar manner to that shown in Fig. 1, with the section 1 preferably on a greater slant.

By making the side members of the section 2 narrower than the side members of the section 1, the section 2 may be engaged in the stirrups in the position shown in Fig. 3 in which the edges of the side members will engage the diagonally opposite edges of the stirrups and wobbling or movement of one section on the other will be prevented. When the sections are arranged as shown in the other figures of the drawings, the stirrups hold the side members of the section 2 and, coacting with the bolts 12, prevent spreading or separation of the sections.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the



principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a ladder, the combination of a ladder section, stirrups secured to the outer sides thereof at the upper end of the same, a second ladder section having side bars adapted to pass upwardly through said stirrups and provided with a longitudinal series of transverse perforations, a bridge piece secured to the first mentioned ladder section below the upper end thereof, lugs on said bridge piece at the ends of the same, longitudinally slotted sliding bolts having their outer ends playing through the said lugs to engage the perforations in the second ladder section and having their inner ends formed into downwardly projecting handles, and headed studs inserted through the slots of said bolts into the bridge piece.

2. A sectional ladder comprising one section with side pieces having steps therewith and provided with socket members, said side pieces also having stirrups secured to their

upper ends to engage notches formed on said ends, a bridge piece on said side members, a second section having rungs part way of their lengths, the upper portion of said section above the rungs being provided with a plurality of apertures therein, said second section being slidably mounted in said stirrups and adapted to have their lower ends mounted in said sockets, so as to form an extension ladder, guide plates on said bridge piece having their inner ends slotted to receive limiting bolts, locking bolts slidably mounted in said plates and adapted to engage certain of the apertures in the side pieces of the second member when the first-mentioned member is spread apart from the second member whereby to provide a step-ladder of any desired height.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK PETRIE.

Witnesses:

TOM W. COATES,  
W. R. MCWILLIAMS.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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