May 27, 1930.

J. WIRTH

1,760,803

COMBINATION LADDER STEP AND SUPPORT

Filed Oct. 11, 1927

2 Sheets-Sheet 1

Fig. 1.

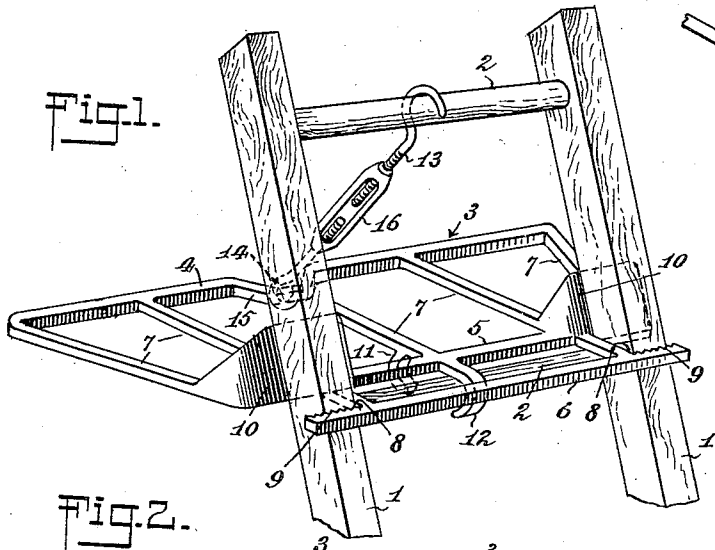


Fig. 4

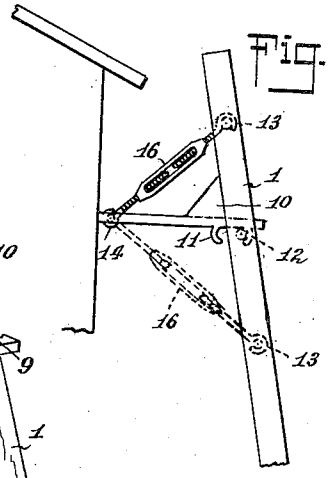


Fig. 2.

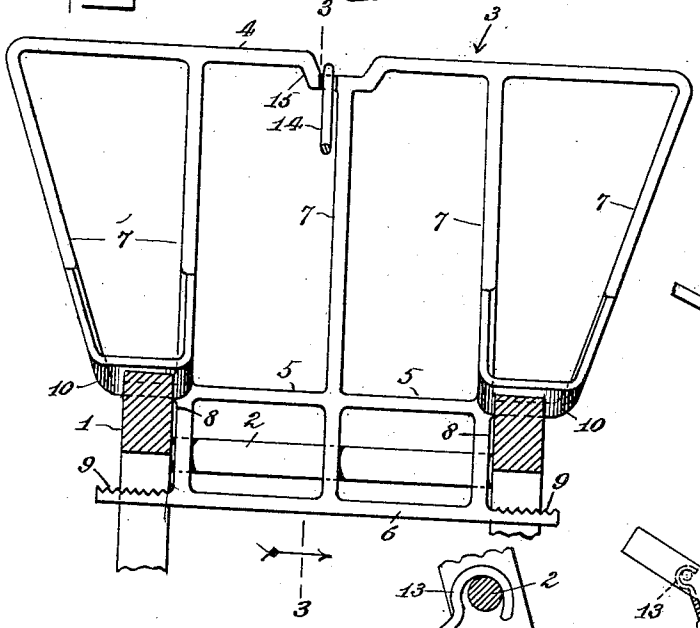


Fig. 5.

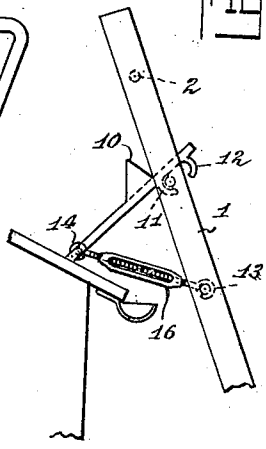


Fig. 3.

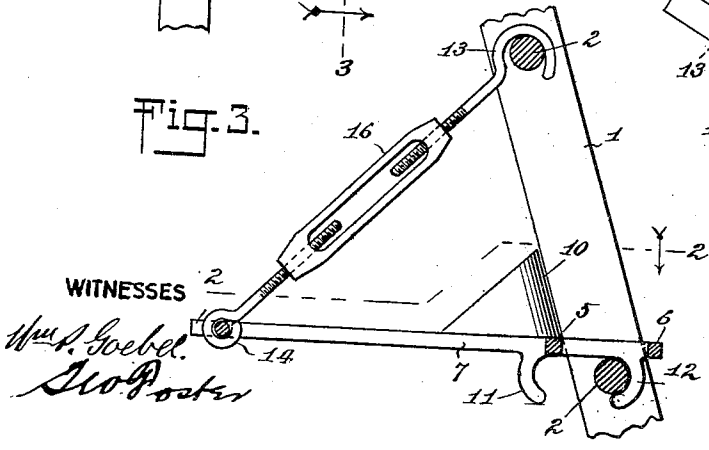
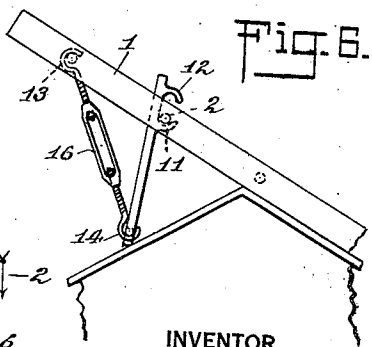


Fig. 6.



WITNESSES

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COMBINATION LADDER STEP AND SUPPORT

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Fig. 7.

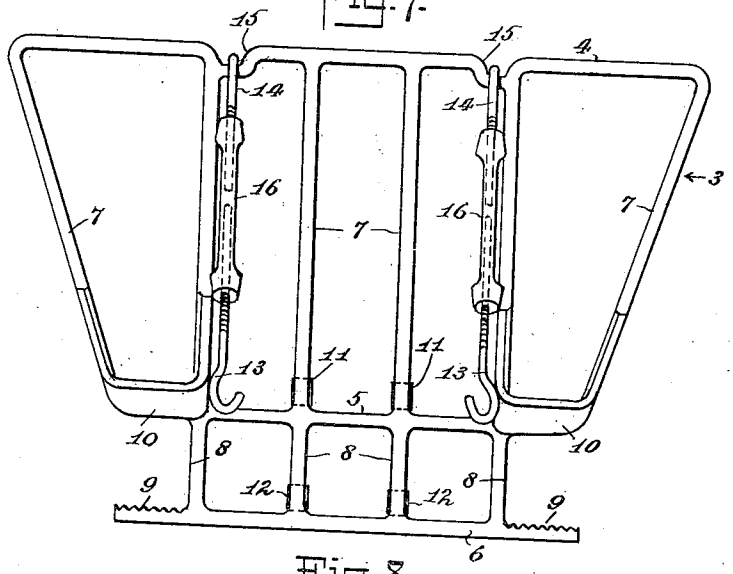


Fig. 8

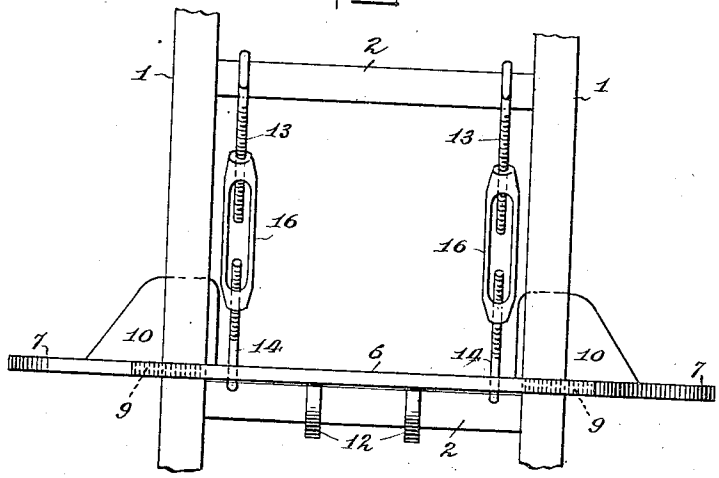
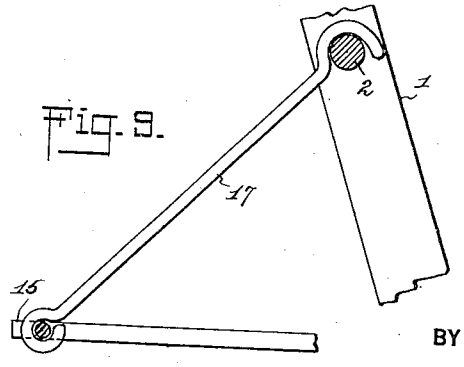


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE

JOHN WIRTH, OF NEW YORK, N. Y.

COMBINATION LADDER STEP AND SUPPORT

Application filed October 11, 1927. Serial No. 225,501.

This invention relates to combination ladder steps and supports.

An object of the invention is to provide a device of this character which may be positioned wherever desired along the length of the ladder, which may be given the desired angular disposition relative to the ladder so as to support the ladder against any portion of a building or roof, and which will also function as a support for a bucket or other article.

A further object is to provide a device of this character which will be rigidly held in position on the ladder and which may be removed and placed on any rung of the ladder desired.

A further object is to provide a device of this character which will be relatively cheap to manufacture and strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, which will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings—

Figure 1 is a perspective view showing my improved device in operative position on a ladder;

Figure 2 is a sectional plan view of Figure 1, the view being taken on the line 2—2 of Figure 3;

Figure 3 is a view in vertical section on the line 3—3 of Figure 2;

Figures 4, 5 and 6 are views in side elevation showing my improved device in different positions relative to the ladder, and showing how the device functions as a support for engagement with various parts of a building;

Figure 7 is a plan view of a modified form of my improved device;

Figure 8 is a view in elevation showing the device illustrated in Figure 7 in operative position on the ladder;

Figure 9 is a view illustrating a modified form of hook which may be employed in connection with my improved device.

1, 1 represent stiles, and 2 the rungs of an ordinary ladder with which my improved device is adapted to function. My improved device enables the ladder to be supported in any position relative to a building, and it includes a platform 3 which may be of skeleton form, as illustrated, having an outer wall engaging bar 4 and a pair of ladder engaging bars 5 and 6 at its inner end, spaced apart a distance sufficient to accommodate the stiles of the ladder between them.

These several bars 4, 5 and 6 are connected by bars 7 in the forms illustrated but it is perfectly obvious that the invention is not limited to the skeleton frame of the device as it may constitute a frame or casting or be made of any material, but in any event the device will have an outer engaging bar or face 4 and will be formed with recesses 8 to receive the stiles of the ladder, and the bar 6 of the walls of said recesses are preferably toothed or serrated, as shown at 9, to prevent the possibility of slipping on the ladder.

Inclined abutments or walls 10 are formed on the platform 3 to engage faces of the stiles of the ladder, while the bars 6 engage the other faces of the stiles of the ladder.

A pair of opposed hooks 11 and 12 is provided on the under face of the device and is adapted to engage a rung 2 of the ladder, as will more fully hereinafter appear. These hooks 11 and 12 have rigid relation to the device or may be integral therewith as desired.

13 represents a movable adjustable hook having an eye 14 at one end engaging a laterally offset portion 15 on the bar 4, and at its other end adapted to be hooked over a rung 2 of the ladder. This hook 13 is preferably made in sections with a turnbuckle 16 connecting the sections so as to permit a longitudinal adjustment of the hook 13.

The operation of the device described and shown in Figures 1 to 6, inclusive, is as follows:

Figure 1 shows the hook 13 engaging a rung 2 of the ladder, above the rung on which the platform 3 is supported, and by tightening or by shortening the hook 13 the parts will be rigidly secured. When the hook 13 engages the rung of the ladder above the rung upon which the platform is supported, the parts will assume the position shown in

Figures 3 and 4, where it will be noted that the rigid hook 12 engages the rung of the ladder. When the hook 13 is swung so as to engage a ladder rung below the rung on which the platform is supported, the hook 11 will engage a rung of the ladder, and in both or either of these positions the parts can be rigidly secured by adjusting the length of the hook 13 after it is positioned over a rung of the ladder.

Figure 4 shows the device supporting the ladder against a vertical wall, Figure 5 shows the device supporting the ladder against an inclined roof, and Figure 6 shows the device supporting the ladder on top of a roof.

In the modification illustrated in Figures 7, 8 and 9, the construction of the platform and integral parts is the same as that above described and like reference numerals are given to the drawings. However, the structure differs from that first described in that I provide two pairs of hooks 11 and 12 and two adjustable hooks 13.

Figure 9 merely illustrates that a non-adjustable hook 17 might be employed in place of the adjustable hooks 13.

Various changes and alterations might be made in the general form of the parts described without departing from the invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

I claim:

A device of the character described, including a platform wider than the ladder to which it is to be connected and having recessed ends adapted to receive the stiles of a ladder, upwardly projecting enlargements at the outer wall of said recesses constituting abutments to engage the stiles of the ladder, a hook pivotally connected to the outer end of the platform and adapted to engage a rung of the ladder either above or below the platform and to force the abutments against the faces of the stiles of the ladder, said hook having a turnbuckle intermediate its ends whereby the hook may be adjusted longitudinally, and a double hook member on the under face of the platform adapted to engage the rungs of a ladder and co-operate with the first-mentioned hook to rigidly secure the platform to the ladder.

Signed at New York, in the county of New York and State of New York, this 8th day of October, A. D. 1927.

JOHN WIRTH.