July 19, 1932. M. D. AVALLONE 1,868,187

SCAFFOLDING

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Fig. 2

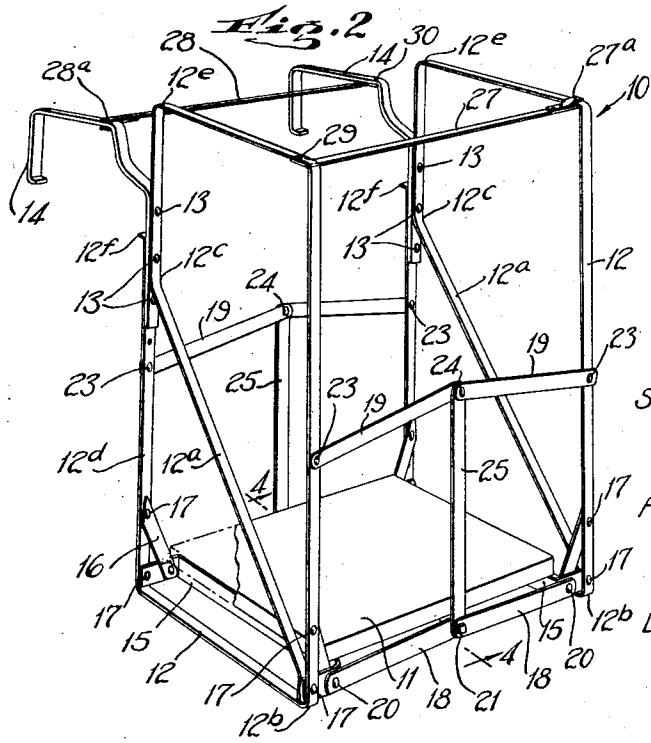


Fig. 1



Fig. 3

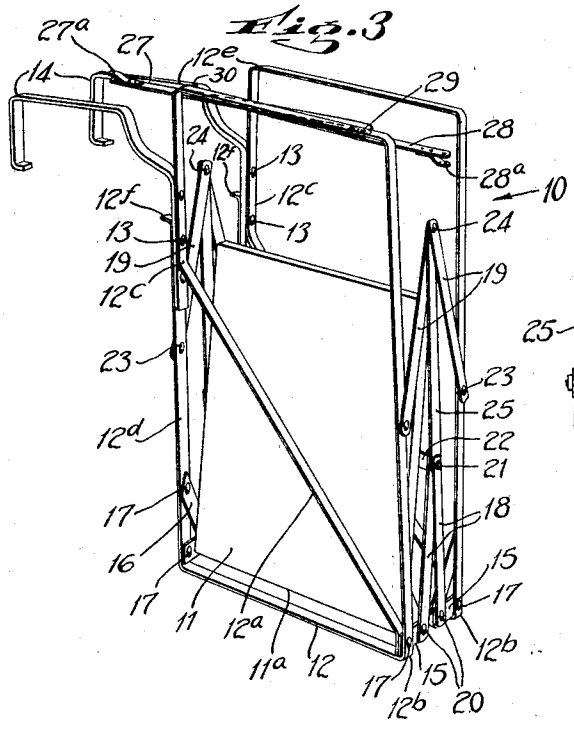
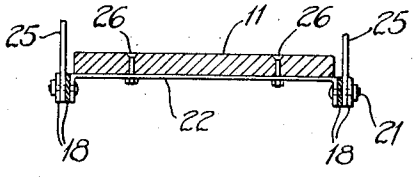


Fig. 4



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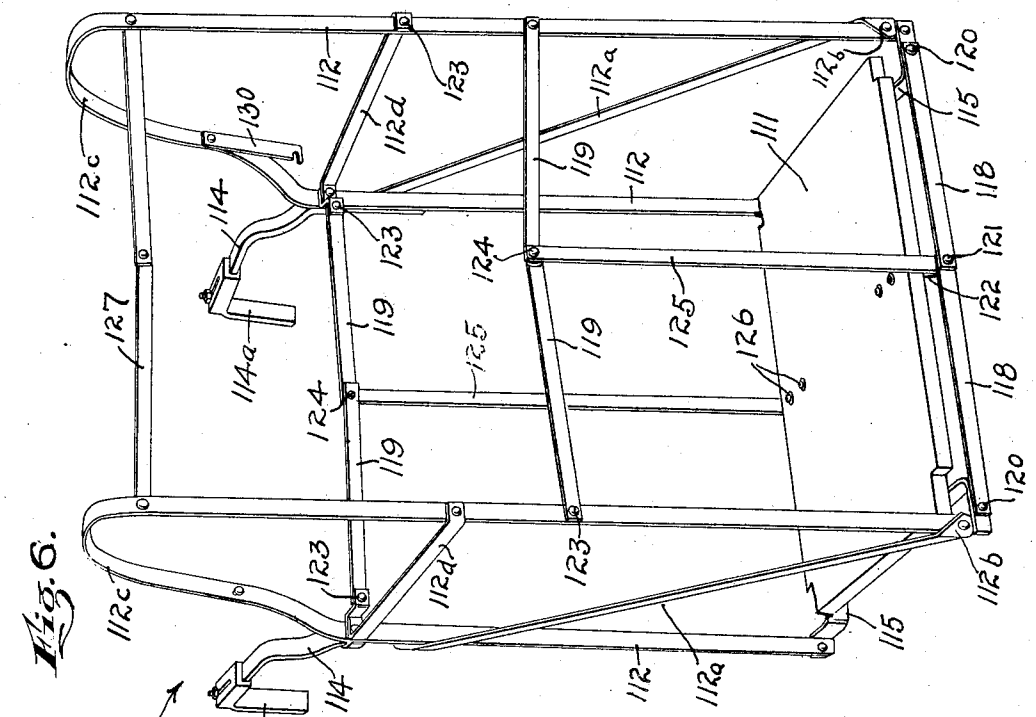


Fig. 6.

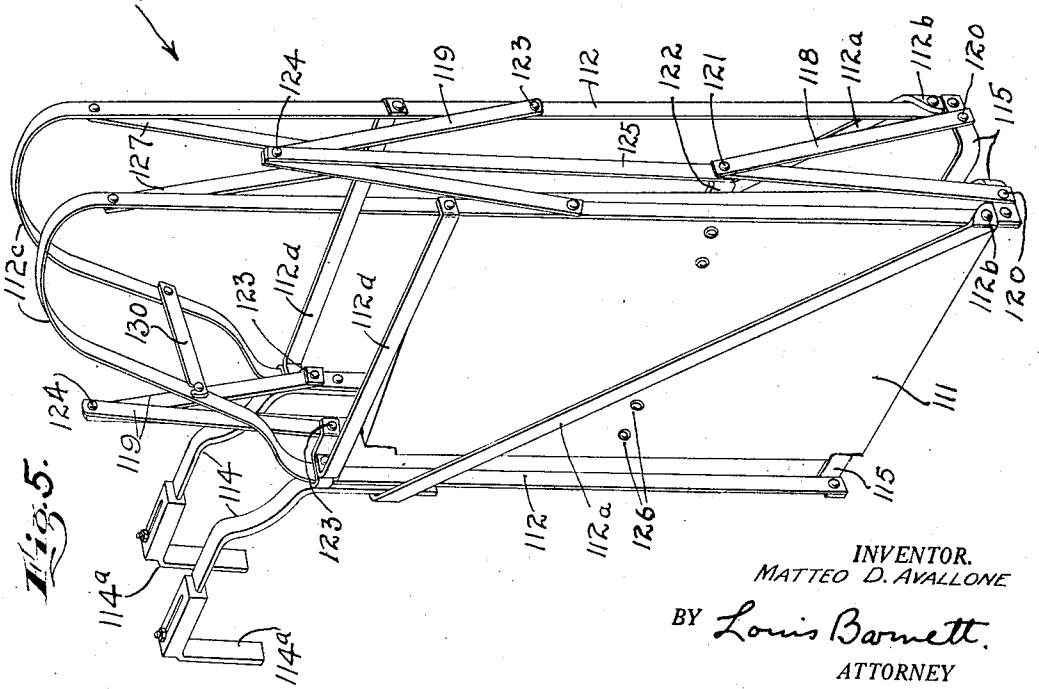


Fig. 5.

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SCAFFOLDING

Application filed February 13, 1931. Serial No. 515,514.

This invention relates to window attaching supports and more particularly is directed to portable scaffolds adapted to be removably installed outside a window opening of a dwelling or building to provide a conveniently positioned and safe stand for cleaning windows, or a handy storage suspension means, and for like purposes.

Among the objects of the invention is the provision of a portable window attaching scaffold of the character described comprising few and simple parts assembled to form a light weight, collapsibly foldable, rugged structure, which shall be easy to install and remove, which shall be safe to use, which shall be cheap to manufacture, and practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described and of which the scope of application will be indicated in the following claims.

In the accompanying drawings, in which is shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a perspective view of a fragmentary portion of a building wall and window showing the improved scaffold embodying the invention suspended from the window drip sill and with a window cleaner supported on the platform of the scaffold in a convenient position for sliding the window sashes and cleaning the panes thereof.

Figs. 2 and 3 are perspective views of the improved scaffold removed from the window in open and folded positions, respectively.

Fig. 4 is a cross-sectional view taken on lines 4—4 in Fig. 2, and

Figs. 5 and 6 are perspective views of a modified construction of the improved scaffold removed from the window in folded and open positions, respectively.

Referring in detail to the drawings, 10 denotes a foldably collapsible scaffold embodying the invention. Said scaffold is adapted to be suspended from the drip sill D of a window frame F provided in a building wall B. The platform 11 of said scaffold 10 is positioned a sufficient distance below the level of the sill D to permit the window cleaner C standing on the platform 11 to conveniently reach and clean the panes P of the sliding sashes S and to move said sashes with minimum exertion and complete safety, as is clearly shown in Fig. 1.

The scaffold 10 may comprise a pair of spaced parallelly aligned, rigid side frames 12, each of which is preferably made of a bar bent to form a rectangular structure having a diagonally extending brace 12*a*. The latter extends from an outer lower corner 12*b* to a portion 12*c* of the opposite frame side 12*d*, said portion 12*c* being a short distance down from the upper inner corner 12*e*. The ends of each bar forming said frame 12 may be secured by welding, bolts or by any other well known means, as for example, rivets 13. The latter at portions 12*c* may be utilized to permanently fasten suitable attachment means to extend outwardly from said frames 12, said means terminating in hooks 14 which are adapted to engage under an interior edge (not shown) of the drip sill D, as is apparent from Figs. 1 and 2.

The ends 12*f* of the bar forming the frame 12 may be outwardly extended to co-operate with the hooks 14 for preventing accidental displacement of the attachment hooks from the sill D after the scaffold 10 is set in position. Each of the frames 12 has a U-shaped member 15 secured and braced to the frame by means of straps 16. Said members and straps may be fastened to the frame 12 in any well understood manner, as by means of rivets 17. Said members 15 project laterally from the lower sides of the frames 12 and are positioned to extend toward each other so as to form a seat for the platform 11 when the scaffold 10 is open as shown in Figs. 1 and 2.

For interconnecting the frames 12, there is provided double sets of spaced links 18 and 19. The links 18 have one end of each pivoted to the ends of the member 15 as at 20, the other ends of said links 18 being secured

together for swinging movement, as at 21, to the opposite ends of a central cross-bar 22. The links 19 have one end of each pivoted on a mid-portion of the upright sides of the frame 12, as at 23. The other ends of the links 19 are pivotally secured together, as at 24, to the upper end of a spacing bar 25, the latter having its lower end pivotally secured to the ends of the links 18, at 21, as is clearly shown in Figs. 1, 3 and 4.

The platform 11 is secured to the central cross-bar 22 by any suitable means, such as bolts 26, and swingable cross-braces 27 and 28 may be provided for interconnecting the top sides of the frames 12. Brace 27 is pivoted, as at 29, to one of the frames 12, and the other brace 28 is pivoted on the hook 14 of the other frame as at 30. Said braces 27 and 28 terminate in suitable clamp-engaging ends 27*a* and 28*a*, respectively.

The members 27 and 28 may be constructed in any suitable manner and as here shown, the ends of members 27 and 28 are formed with right angle projections by which they are pivoted to the frame at 29 and 30, respectively, as shown in Figs. 2 and 3. This projection in the member 28 is necessary to clear the edge of the depressed portion of member 14.

The utility of the scaffold will now be apparent. When not in use, the parts of said scaffold are collapsibly folded as shown in Fig. 3, the links 18 and 19 being swung upwardly on the hinges 17, 21 and 24 so that the platform 11 is tilted on the central cross-bar 22. One end 11*a* of the platform 11 fits into the space between the member 15 and the frame 12 permitting the platform to lie close against the frame 12. The cross-braces 27 and 28 are swung out of their effective positions to extend along the frames 12. Thus it is seen that the scaffold 10 may be folded into a very compact body for storage and transportation.

To install the scaffold 10 it is simply necessary to spread the frames 12 apart by merely swinging the links 18 and 19 on the pivots 17, 21 and 24 until the platform 11 is seated on the members 15. The cross-braces 27 and 28 are then swung so that the clamp ends 27*a* and 28*a*, respectively, thereof engage on the opposite frame 12 and hook 14, respectively. The hook ends 14 are then engaged on the drip sill D with the scaffold 10 positioned against the wall on the exterior side of the building B, as is clearly shown in Fig. 1. In this position, a window cleaner C standing on the platform 11 is situated at a convenient height to slide the window sashes up and down with the least effort and to reach all the window panes P with ease and safety.

In Figs. 5 and 6, a modified construction of the improved invention is shown. Here scaffold 110 is formed of parts which are of simpler construction and consequently provide a lighter and more compact device than that described above and shown in Figs. 1 and 2. Said scaffold 110 is seen to comprise a pair of spaced parallelly aligned rigid side frames 112 each having a diagonally extending brace 112*a*. The opposite ends 112*b* of said brace are bent round and riveted or otherwise fastened to the front and rear side of the frames 112.

The hooks 114 in this modified construction are provided with suitable extensibly adjustable ends 114*a* so that the scaffolding 110 may be fitted to drip sills of various widths.

Each of the frames 112 has a U-shaped member 115 projecting laterally from the lower sides of the frames 112, said members being positioned to extend towards each other so as to form a seat for the platform 111 when the scaffold 110 is open as shown in Fig. 6. Unlike the construction of the scaffold 10 described above, the member 115 is incorporated to serve as a brace for interconnecting the lower ends of the frames 112.

The upper sides 112*c* of the frames 112 are bowed outwardly and extend a substantial distance above the level of the hooks 114 to provide higher side walls for the scaffolding. The outer side of said frames 112 adjacent the upper side 112*c* may be provided with a hinged brace 127 which is downwardly collapsible.

The side frames 112 unlike frames 12 of the scaffold 10 may be provided with cross-bars 112*d* extending laterally just above the diagonal braces 112*a*, and like said scaffold 10, frames 112 are interconnected by a double set of spaced links 118 and 119. The links 118 having one end of each pivoted to the member 115, as at 120. The other ends of said link 18 are secured together for swinging movement, as at 121, to a fastening angle 122 extending from platform 111. The links 119 have one end of each secured to the mid-portion of the upright side of the frames 112, as at 123. The other ends of the link 119 are pivotally secured together, as at 124, to the upper end of a spacing bar 125, the latter having its lower end pivotally secured to the ends of the links 118, at 121 as is clearly shown in Figs. 5 and 6. Preferably, the rear upright bar 125 is longer than the front bar so as to bring the rear links 119 in alignment with the cross-bars 112*d* and hooks 114. This construction eliminates the necessity of providing an extra hinged brace on the rear side of the scaffold. The platform 111 is secured to the fastening angles 122 by any suitable means, such as bolts 126.

The scaffold 110 when not in use has the parts thereof collapsibly folded as shown in Fig. 5, and is retained in said folded position by a suitable latch 130. The links 118 and 119 are then swung upwardly on the hinges 120, 121, 123 and 124 so that the platform 111

is in tilted position, the brace bar 127 being swung downwardly. Thus the scaffold 110, like scaffold 10, is folded into a very compact body for storage or transportation.

Scaffold 110 is readily unfolded and suspended from a drip sill upon a window opening, the hooked ends 114*a* being first adjusted to fit the width of the drip sill. When the scaffold 110 is positioned against the wall of the exterior side of the building and suspended from a window opening, the window cleaner standing on the platform 11 is situated at a convenient height to slide the window sashes up and down with the least effort and to reach all the window panes with ease and safety as is apparent from Fig. 1.

From the above description and drawings, it is seen that the scaffolds 10 and 110 although made of relatively light weight material form exceptionally strong, rugged, and braced structures which are capable of withstanding the roughest use.

The scaffolds 10 and 110 may also be utilized as handy storage means, as for example as supports for boxes, plants or other receptacles.

It will thus be seen that there is provided scaffolds in which the several objects of this invention are achieved and which are well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiments above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A window scaffold of the character described comprising a pair of spaced frames, means interconnecting said frames for collapsibly folding said scaffold when not in use, window sill engaging means extending from said frames, a platform and pivotal connections to mount said platform on said interconnecting means for swinging movement between said frames at a spaced distance from said engaging means.

2. In a portable window scaffold of the character described, a pair of spaced frames, foldably collapsible parts interconnecting said frames, and a platform having ends supported by said frames and being pivotally mounted between said parts.

3. A window scaffold of the character described comprising a pair of spaced frames, spaced links interconnecting said frames for collapsibly folding said scaffold when not in use, window sill engaging hooks extending from said frames, a platform pivotally mounted on said links for swinging movement between said frames, and means on said frames for supporting opposite ends of said platform.

4. A window scaffold of the character described comprising a pair of spaced end frames, front and back sides consisting of sets of spaced links interconnecting said frames for collapsibly folding said scaffold when not in use, window sill engaging hooks extending from said frames, and a platform demountably supported on said frames, said platform and links being pivoted together for swinging movement on foldably collapsing said scaffold.

5. A window scaffold of the character described comprising a pair of spaced frames, foldably collapsible parts interconnecting said frames, window engaging hooks extending from said frames, a platform supported on said interconnecting parts at a spaced distance from said hooks, and pivoted bracing means extending between said frames on the end of the scaffold opposite said platform.

6. A window scaffold of the character described comprisng a pair of spaced frames, spaced links interconnecting said frames for collapsibly folding said scaffold when not in use, window sill engaging hooks extending from said frames, said hooks having extensible ends adapted to be adjusted for various widths of sills, and a platform pivotally connected to said links for swinging movement between said frames.

In testimony whereof I affix my signature.

MATTEO D. AVALLONE.