Feb. 2, 1943. J. BRONCATO 2,310,062

SCAFFOLD STRUCTURE

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Fig. 1.

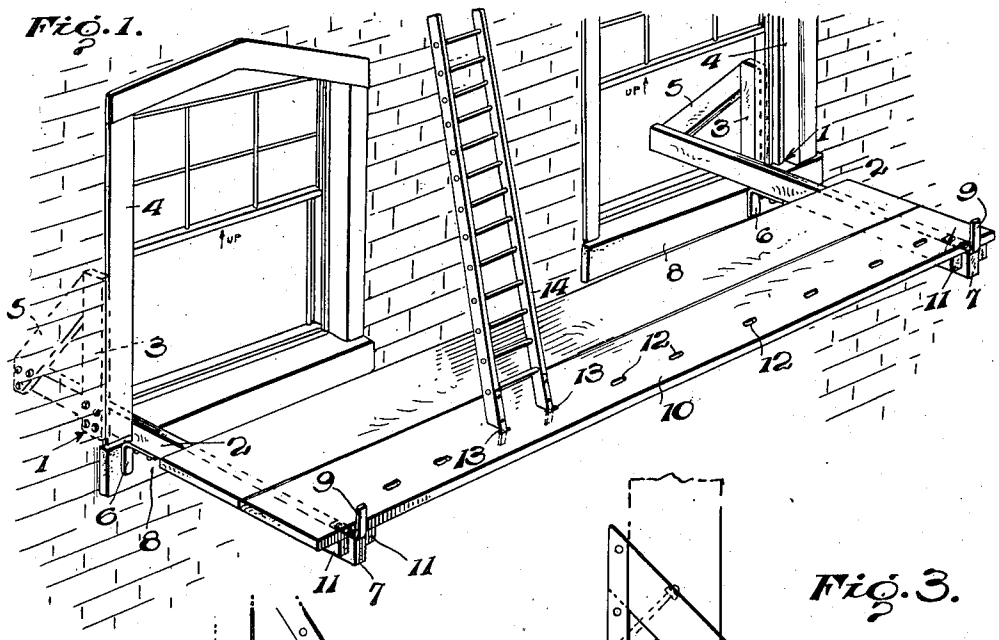


Fig. 2.

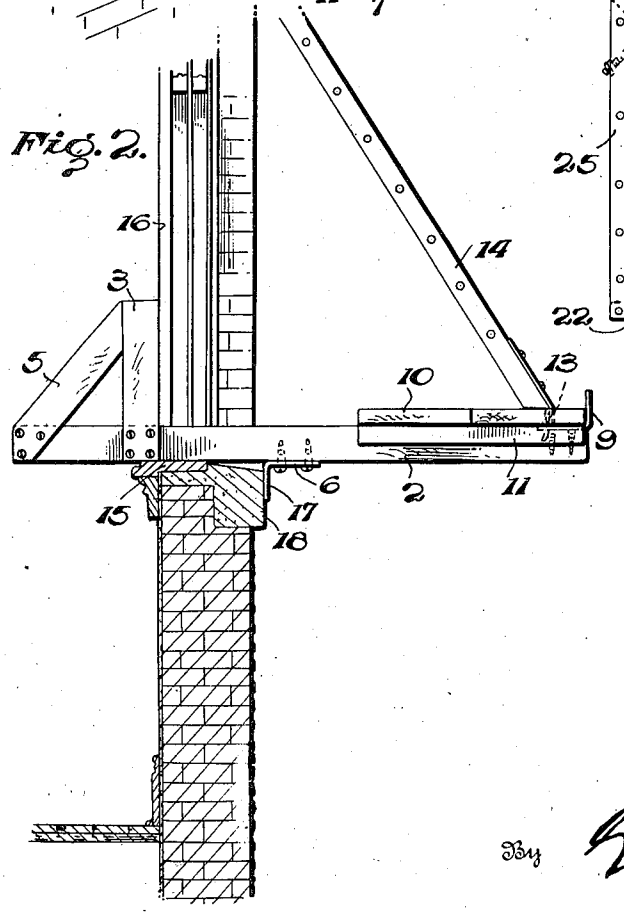
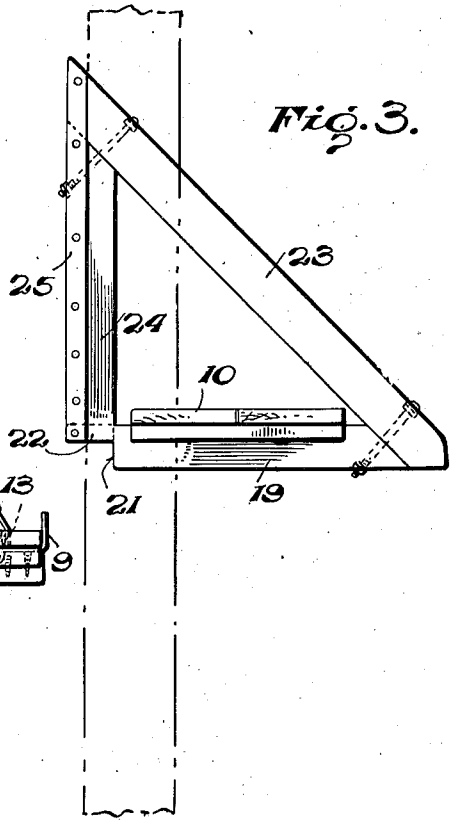


Fig. 3.



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Fig. 4.

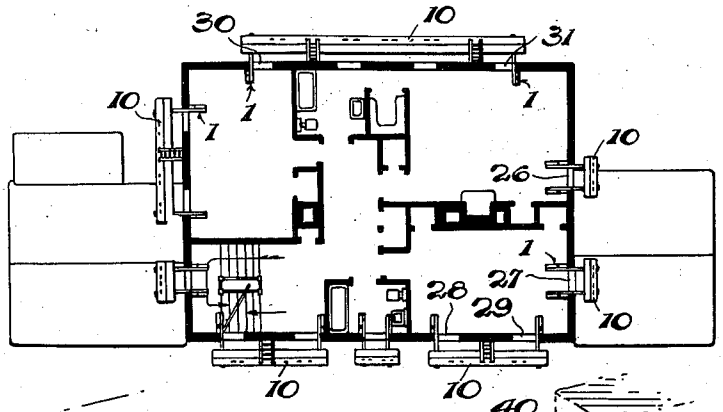


Fig. 5.

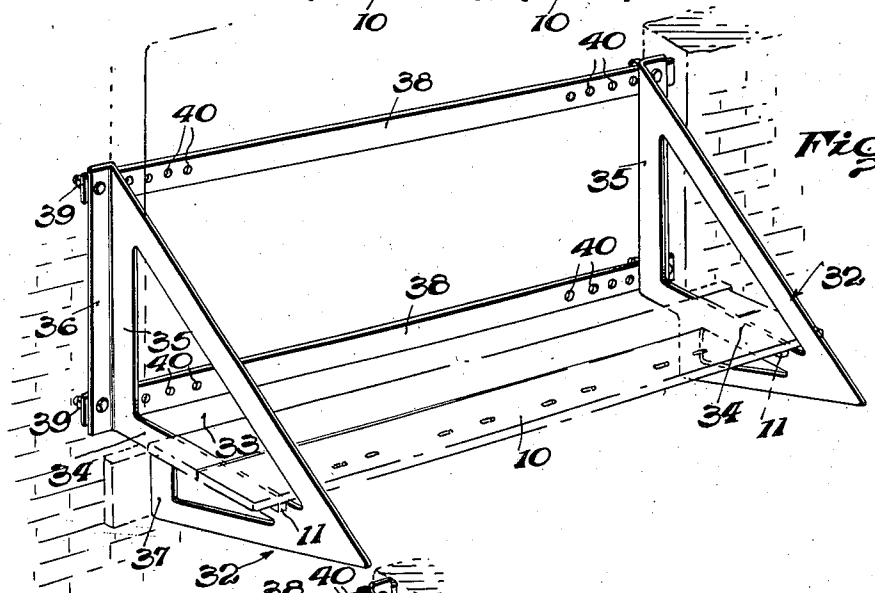
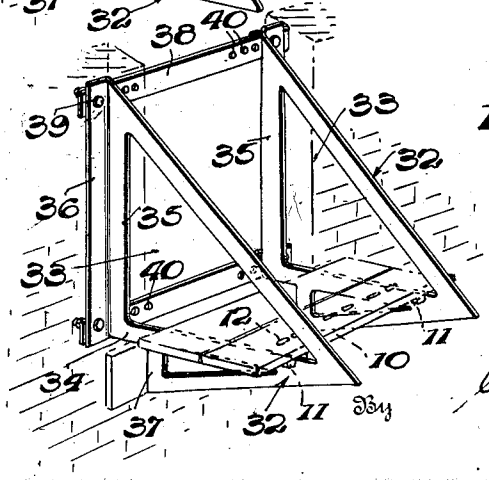


Fig. 6.



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Patented Feb. 2, 1943 2,310,062

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2,310,062

SCAFFOLD STRUCTURE

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Application February 21, 1941, Serial No. 380,048

5 Claims. (Cl. 304—14)

My invention relates to scaffolds and more particularly to a scaffold arrangement adapted to be supported from window frames.

In accordance with the present invention there is provided an improved scaffold arrangement wherein the scaffold planks are supported upon bracket members adapted for insertion through a window frame. The individual brackets comprise generally, a horizontal arm adapted to rest on a window sill, the portion extended outwardly of the window forming a support for a scaffold plank and the portion inwardly of the window having a vertical offset piece adapted for engagement with the facing strip of the window frame. Means are provided on the scaffold plank supporting portion of the arm to limit lateral movement of the plank with respect to the brackets, and to prevent inward movement of the brackets with respect to the window sill.

The invention also comprehends a window scaffold arrangement wherein the scaffold plank support is in the form of a unitary structure comprising a frame member having a pair of brackets associated therewith, the bracket portions of the support being adapted to be inserted through a window frame and maintained in the operative position by means of outwardly turned flange portions adapted for engagement with the window facing strips.

An object of my invention is to provide an improved scaffold arrangement of the character to be supported from window frames.

Another object of my invention is to provide a scaffold arrangement having improved support means for the scaffold planks.

Yet another object of my invention is to provide a scaffold arrangement adapted for use with single or double windows, or with windows suitably spaced to provide scaffolds along the entire side of a dwelling or other building.

Still another object of my invention is to provide a scaffold arrangement in the form of a unitary scaffold plank support, comprising a frame and a pair of brackets adapted for insertion through a window frame.

A further object of my invention is to provide a scaffold arrangement wherein the scaffold plank supporting brackets are formed from single pieces of suitable sheet metal.

A still further object of my invention is to provide a scaffold arrangement of the character to be supported from window frames, adapted to be adjusted to accommodate different widths of window frames.

With these and other objects in view, which may be incident to my improvements, the invention consists in the parts and combinations to be hereinafter set forth and claimed, with the understanding that the several necessary elements, comprising my invention may be varied in construction, proportions and arrangement, without departing from the spirit and scope of the appended claims.

In order to make my invention more clearly understood, I have shown in the accompanying drawings means for carrying the same into practical effect without limiting the improvements in their useful applications to the particular constructions, which for the purpose of explanation, have been made the subject of illustration.

In the drawings:

Figure 1 is a perspective view of the scaffold showing the arrangement of the scaffold planks and support brackets when in use.

Fig. 2 is an elevational view of one of the brackets shown in Fig. 1, in operative position on a window sill.

Fig. 3 is an elevational view of a modified form of scaffold bracket.

Fig. 4 is a conventional plan view of the second floor of a dwelling, showing various combinations of my improved scaffold arrangement with window frames of the dwelling.

Fig. 5 is a perspective view of a modified form of scaffold bracket adapted for use with double windows; and

Fig. 6 is a perspective view of a bracket arrangement of the type shown in Fig. 5, as used with a single window.

Referring to the drawings and more particularly to Fig. 1, the improved scaffold arrangement of the present invention comprises a pair of brackets designated generally by numeral **1**, each bracket having a scaffold plank supporting portion **2** and a vertical offset member **3** adapted to engage with the facing strips of a window frame **4**. It will be noted that the portion of the bracket inwardly of the window is in the form of a triangle, that is to say, the vertical member **3**, together with brace **5**, which may be in the form of a stringer extending between the top portion of the vertical member and the horizontal part of the bracket, forms with the horizontal portion of the bracket a right triangle.

By means of the design of the design of the triangular shaped portion inwardly of the window a strong and substantial support is provided for the scaffold planks. Since the vertical member **3** is offset with respect to the plane of the horizontal portion of the bracket and is braced by means of

member 5, the forces tending to move the vertical member about its point of support are overcome due to their transmission to the bracing member 5, to the rear of the vertical member. In other words any tendency of the vertical members to move rearwardly of its point of support is offset by the brace member 5 and considerable weight can therefore be supported on the scaffold which in turn causes the vertical member to be drawn into tight engagement with the facing strips of the window.

The scaffold plank supporting portion 2 of the brackets is provided on its under side with an angle piece 6, suitably spaced from the end 7 of the plank supporting portion and adapted for engagement with the bottom portion 8 of the window frame. It will thus be seen that when the bracket 1 is placed in position on a window sill with the vertical member 3 to the rear and in contact with the window facing strip, that inward movement of the plank supporting portion is prevented by means of the angle piece 6. A similar angle member 9 is attached to each plank supporting portion in the vicinity of the end 7, to prevent longitudinal movement of the scaffold planks 10 with respect to the brackets.

In order to prevent lateral movement of the scaffold planks 10 with respect to the brackets the planks are provided in the vicinity of their end portions with cleats 11, which are spaced a distance substantially equal to the width of plank supporting portions 2. Recesses 12 may also be formed in one of the planks to receive projections 13 formed on the rung support members of a ladder 14, to prevent accidental slipping of the ladder.

Referring to Fig. 2 it will be noted that the bracket is adapted to rest in a substantially horizontal position on the window sill 15 and that when it is in the operative position, vertical member 3 is in engagement with the facing strip 16 of the window frame. It will also be noted that the vertical portion 17 of the angle member 6 is then in engagement with the outer face 18 of the bottom of the window frame.

In the use of the improved scaffold, when it is desired to support it along one side of a building, brackets 1 are inserted through the window frames with the vertical members 3 adjacent the facing strips. The scaffold planks 10 are then placed in position on the plank supporting portions 2, with cleats 11 on either side thereof, thus forming a substantially rigid structure. The improved scaffold does not require any special tools in order to assemble the parts in the operative supported position from the window frames. After the brackets have been placed in position and the scaffold planks seated on the supporting arms, movement of the brackets laterally is prevented by reason of the arrangement of the cleats and inward movement is prevented by means of the angle pieces.

Referring to Fig. 3, there is shown a modified form of scaffold bracket adapted for use with single windows. In this arrangement the scaffold planks 10 are supported on the horizontal member 19 having a cutout portion to form an edge 21 adapted to abut the outer face of the bottom of the window frame, and a horizontal portion 22 extending inwardly of the window. Between the base portion 19 and stringer 23 there is provided a vertical member 24 which also extends a short distance within the window frame. A strip 25 is attached to members 19, 22 and 23 as shown, to form an offset for engagement with the inner facing strip. The modified form of scaffold comprises a pair of brackets spaced apart a distance substantially equal to the width of a window and is intended to be inserted as a unit through a window frame. The scaffold planks may extend only across the two brackets or if two units are positioned in end windows the scaffold planks can be extended across one side of the building.

Referring to Fig. 4, various combinations of the scaffold support brackets are shown as used on the dwelling. If it is desired to provide a scaffold having single windows, a pair of brackets are inserted through the frames of windows 26 and 27, for example. Scaffold planks can be supported between adjacent windows 28 and 29 or the planks can extend across one side of the building by using one bracket in each of the end windows 30 and 31.

Referring to Figs. 5 and 6, there is shown a modified form of scaffold support formed from sheet metal. In this arrangement the brackets, indicated generally by numeral 32, are stamped from single pieces of material. Each bracket is formed with a right triangular shaped cutout portion 33, defining a base 34 to receive the scaffold planks 10, and vertical leg 35 having an outwardly turned flange 36 adapted for engagement with the window facing strip. Adjacent the base 34 there is also provided a right triangular shaped portion, the vertical leg 37, which abuts the outer face 18 of the bottom of the window frame. The brackets 32 are maintained in suitable spaced relation by means of strips 38 which may be bolted as at 39, or otherwise attached to the vertical flange portions 36. The strips 38 are provided with a plurality of openings 40 in the vicinity of their end portions, so that the distance between brackets can be adjusted to accommodate the scaffold support to different widths of windows.

In the use of the forms shown in Figs. 5 and 6, that is, double or single windows, the scaffold supports are made up in units to fit the particular window from which they are to be supported and are placed in position by inserting brackets through the window frames, with flanges 36 in engagement with the facing strips and vertical legs 37 abutting the outer face at the bottom of the frame. The scaffold planks are then inserted through triangular shaped openings 33 and set on the bases 34, cleats 11 preventing lateral movement of the planks with respect to the brackets.

While I have shown and described the preferred embodiment of my invention, I wish it to be understood that I do not confine myself to the precise details of construction herein set forth by way of illustration, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claims.

I claim:

1. A scaffold of the character to be supported from window frames comprising a pair of brack- etc, each comprising a horizontal base member adapted to rest on a window sill, one end of said base extending outwardly of the window to provide a support for a scaffold plank, the other end of the base extending inwardly of the window and having an offset portion adapted for engagement with the facing strip of a window frame, means associated with the free end of the plank supporting portion to limit longitudinal movement of a scaffold plank with respect to

the bracket, means attached to the under side of said portion adapted for engagement with the outer face of a window sill, a scaffold plank extending between the brackets and freely supported thereon, and means attached to the plank in the vicinity of its free ends for engagement with the brackets to prevent lateral movement of the plank with respect to the brackets, comprising pairs of cleat members, each pair being spaced apart a distance substantially equal to the width of the base portions of the brackets and forming a slot to receive the upper edge portions of the brackets.

2. A scaffold of the character to be supported from window frames comprising a pair of brackets, each comprising a horizontal base member adapted to rest on a window sill, one end of said base extending outwardly of the window to provide a support for a scaffold plank, the other end of the base extending inwardly of the window and having a vertical member attached thereto adapted for engagement with the facing of a window frame, bracing means for said member comprising a stringer positioned between the top of the member and the free end of the bracket within the window, means associated with the free end of the plank supporting portion to limit longitudinal movement of a scaffold plank with respect to the brackets, means attached to the under side of said portion adapted for engagement with the outer face of a window sill, a scaffold plank extending between the brackets and supported thereon, and means attached to the plank in the vicinity of its free end for engagement with the brackets to prevent lateral movement of the plank with respect to the brackets.

3. A scaffold of the character to be supported from window frames comprising a pair of brackets, each comprising a horizontal base member adapted to rest on a window sill, one end of said base extending outwardly of the window to provide a support for a scaffold plank, the other end of the base extending inwardly of the window and having an offset portion in the form of a right triangle, the vertical leg of which engages with the facing strip of a window frame when the bracket is in operative position on a window sill, means associated with the free end of the plank supporting portion to limit longitudinal movement of a scaffold plank with respect to the brackets, means attached to the under side of said portion adapted for engagement with the outer face of a window sill, a scaffold plank extending between the brackets and supported thereon, and means attached to the plank in the vicinity of its free ends for engagement with the brackets to prevent lateral movement of the plank with respect to the brackets.

4. A scaffold of the character to be supported from window frames, comprising a pair of spaced right triangular shaped brackets having triangular shaped openings therein to receive a scaffold plank, a scaffold plank extending through said openings and seated on the bases of the triangles formed thereby, means attached to the plank in the vicinity of its free ends for engagement with said bases to prevent lateral movement of the plank with respect to the brackets, a right triangular shaped portion formed on the base of each bracket, the vertical leg of said portion being adapted for engagement with the outer face of a window sill, an offset portion formed on the vertical leg of each bracket adapted for engagement with the facing strip of a window frame and means to maintain the brackets in spaced relation comprising a pair of connecting members attached to the offset portions.

5. A scaffold of the character to be supported from window frames, comprising a pair of spaced right triangular shaped brackets, formed from single pieces of sheet material, and having triangular shaped openings therein to receive a scaffold plank, a scaffold plank extending through said openings and seated on the bases of the triangles formed thereby, means attached to the plank in the vicinity of its free ends for engagement with said bases to prevent lateral movement of the plank with respect to the brackets, a right triangular shaped portion adjacent the base of each bracket, the vertical legs of said portion being adapted for engagement with the outer face of a window sill, an offset portion integral with the vertical legs of each bracket adapted for engagement with the facing strip of a window frame, and means to maintain the brackets in spaced relation comprising a pair of connecting members attached to the offset portions.

JOSEPH BRONCATO.