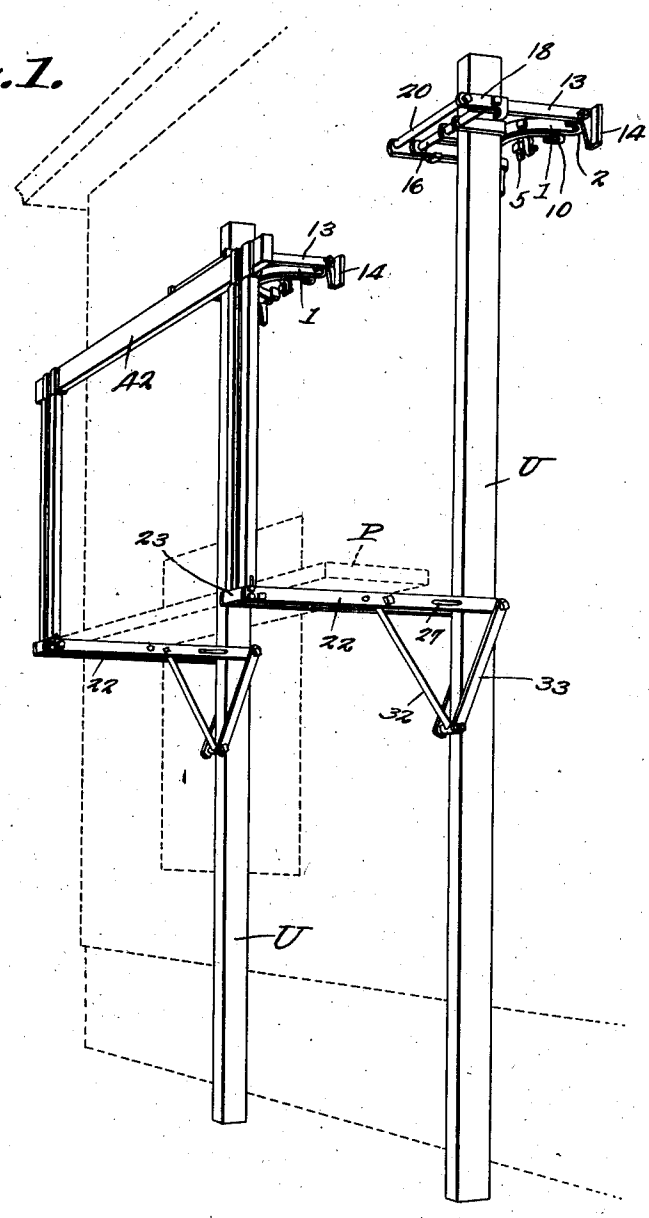
Jan. 7, 1947. G. W. WETZEL 2,414,078

SCAFFOLDING

Filed Nov. 1, 1945 3 Sheets-Sheet 1

Fig. 1.



G. W. Wetzel

INVENTOR.

BY C. A. Brown & Co.

ATTORNEYS.

Jan. 7, 1947. G. W. WETZEL 2,414,078

SCAFFOLDING

Filed Nov. 1, 1945 3 Sheets-Sheet 2

Fig. 2.

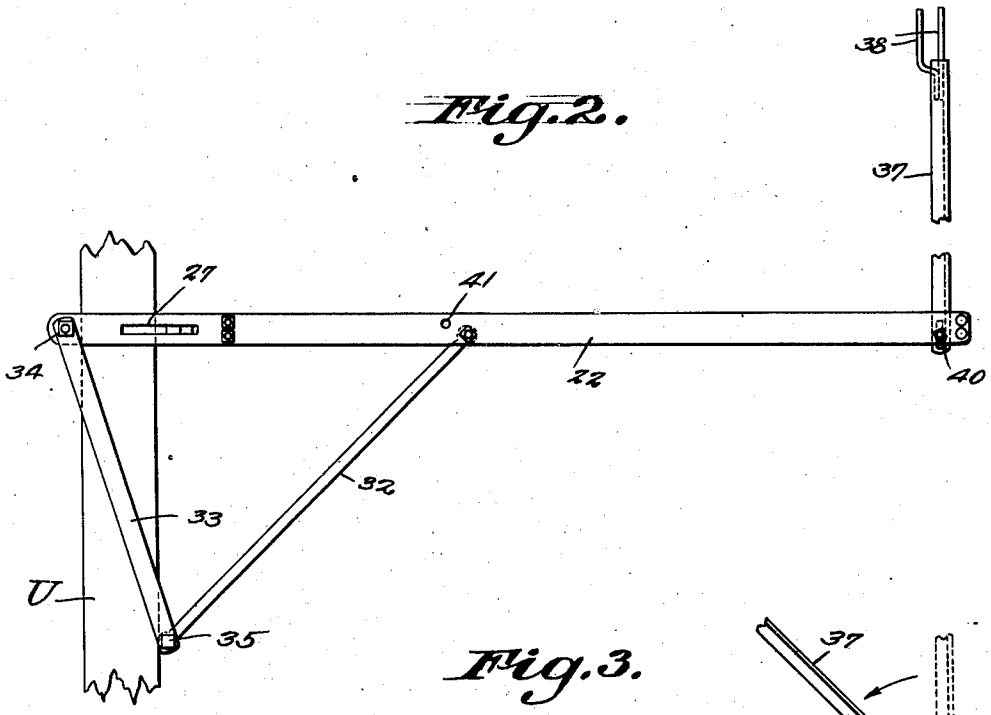


Fig. 3.

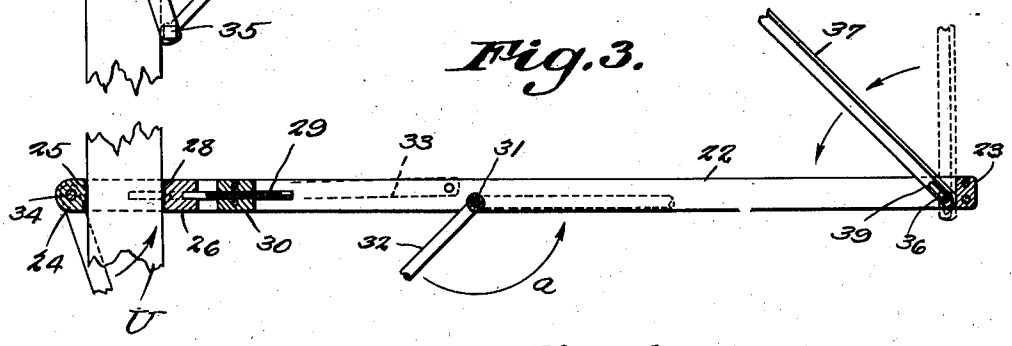
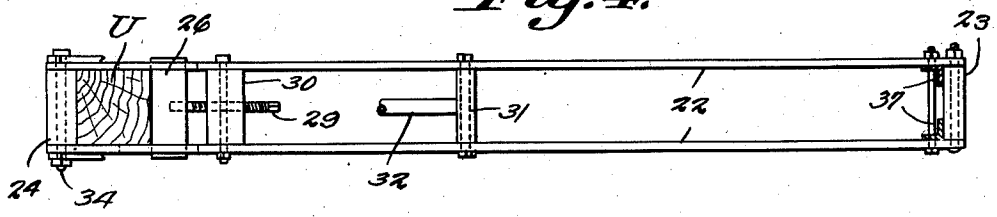


Fig. 4.



G. W. Wetzel

INVENTOR.

BY Albert Co.

ATTORNEYS.

Jan. 7, 1947. G. W. WETZEL 2,414,078

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Filed Nov. 1, 1945 3 Sheets-Sheet 3

Fig. 5.

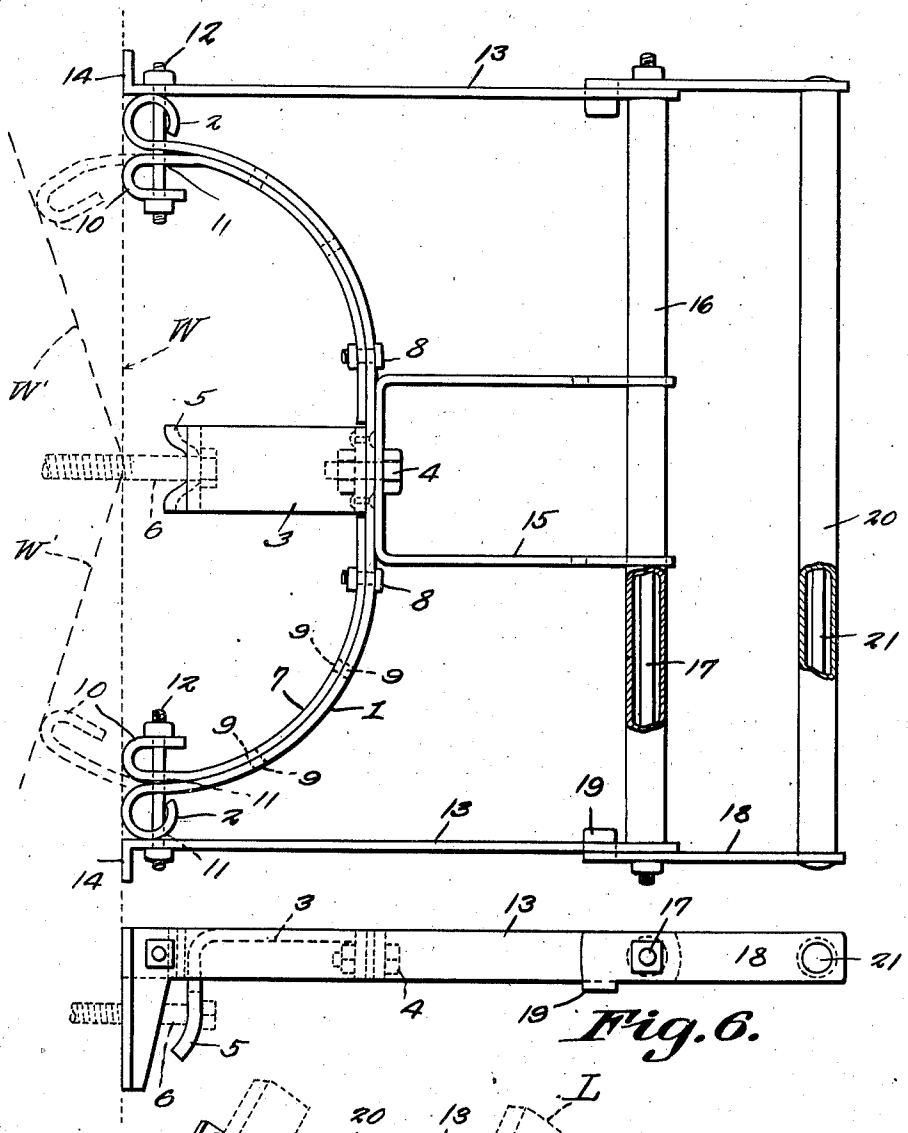


Fig. 6.

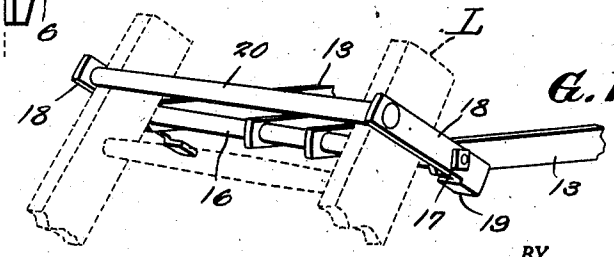


Fig. 7.

G. W. Wetzel

INVENTOR.

BY

Albert Co.

ATTORNEYS.

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UNITED STATES PATENT OFFICE

2,414,078

SCAFFOLDING

George Wilbur Wetzel, Macomb, Ill.

Application November 1, 1945, Serial No. 626,038

4 Claims. (Cl. 304—10)

1

This invention relates to scaffolding designed primarily for use by painters and others who must usually use ladders or scaffolding in performing their work on the walls of buildings and other structures. It is an object of the invention to provide scaffolding which can be compactly collapsed when not in use but can be quickly set up and, when properly placed in position, will be held firmly attached to the wall or other surface on which work is being done.

A further object is to provide scaffolding which utilizes an attaching bracket of new and novel construction whereby it can be attached readily to either flat or angular surfaces and will act to hold the scaffold firmly in position.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a perspective view showing the scaffolding erected at the side of a building outlined with broken lines.

Figure 2 is a side elevation of a portion of the scaffolding, parts being broken away.

Figure 3 is a vertical longitudinal section through one of the platform supports of the scaffolding, some of the positions of the parts being indicated by broken lines.

Figure 4 is a top plan view of the structure illustrated in Fig. 3.

Figure 5 is an enlarged plan view of the attaching bracket equipped to hold a ladder in upstanding position.

Figure 6 is a side elevation of the structure shown in Fig. 5.

Figure 7 is a perspective view showing a portion of a ladder connected to the bracket, parts of the bracket being removed.

Referring to the figures by characters of reference, 1 designates a bowed body strip of the attaching bracket which, as shown particularly in Fig. 5, has terminal loops 2 constituting bearings. Secured to one side of this body strip at the center thereof is an angle bracket 3 held in place preferably by a bolt 4 which extends entirely through the body strip.

Depending from the bracket 3 is a fork 5 pro-

2

portioned to receive one end portion of a bolt 6 or the like extending from the wall W to which the bracket is to be connected.

The angle bracket 3 is located midway between the terminal loops 2 and extends from the concave side of the body strip 1. To this same side of the body strip are connected oppositely disposed adjustable arcuate strips 7 adapted to be held to the body strip 1 by bolts 8 insertable into selected openings 9 in the strips 1 and 7. Thus these strips can be adjusted relative to each other so as to change the relative positions of the terminal loops 10 which are formed at those ends of the arcuate strips 7 remote from the angle bracket 3.

Normally registering openings 11 can be located in the loops 2 and 10 and these openings are adapted to receive tie bolts 12 which serve not only to hold the strips 1 and 7 properly assembled at their looped ends under normal working conditions, but also serve to connect to the end portions of strip 1 side bracket members 13 between which the body strip 1 is located. Each of these bracket members 13 which preferably is in the form of a flat strip of metal, has an abutment foot 14 at that end thereof nearest the bolt 12 and these feet are so positioned that when the bracket is placed against a wall W, the feet will also be pressed against the wall, thereby holding the side members in substantially horizontal upstanding positions.

Secured to the convex side of the body strip 1 at the center thereof is a yoke 15 extending in a direction opposite to the angle bracket 3 and held in place preferably by the bolt 4. A spacing sleeve 16 is extended through the ends of the yoke 15 and serves to hold the side members 13 properly spaced apart. This sleeve also contains a tie bolt 17 which is extended through the members 13 so as to hold them assembled with the sleeve 16. Also mounted on the tie bolt adjacent to the ends thereof are links 18 having stop lugs 19 adapted to be positioned beneath the side members 13 for the purpose of limiting the downward movement of links about the tie rod. These links are also provided with a spacing sleeve 20 and extending through this sleeve and the links is a tie rod 21.

The yoke 15 is proportioned to receive an upright member U of a scaffolding and obviously by first hooking the fork 5 onto the projecting head portion of a bolt or the like secured to a wall W, the strip 1 will not only be held firmly to the wall by the upright located in the yoke but will also be held assembled with the wall. Should the bracket be located at the corner of a

wall, it could be placed astride the corner and held firmly simply by locating the bolt 6 at the corner and then adjusting the strips 7 longitudinally so that the attaching bracket thus will straddle the corner. This has been indicated by dotted lines in Fig. 5 wherein the corner portion of a wall has been shown at W'.

For the purpose of adjustably mounting a platform on uprights of a scaffolding, each upright, after it has been set in place and secured by means of brackets such as already described, is equipped with a platform support which is illustrated in detail in Figs. 2, 3, and 4. Each of these supports includes side strips 22 having spacing blocks 23 and 24 between the respective ends thereof. One of these spacing blocks is toothed or serrated as shown at 25 for engagement with one surface of an upright U. This upright is extended between the side strips 22 and is adapted to be adjustably engaged at its opposed surface by a jaw 26 extending transversely of the strips and slidable in slots 27 formed in the strips. The jaw, which has a serrated engaging surface 28, is provided with an adjusting screw 29 extending therefrom through a feed block 30 interposed between and secured to the strips 22. Screw 29, when rotated in one direction, will force the jaw 26 toward block 24 so that uprights of different sizes thus can be tightly gripped and the strips 22 held firmly thereto while extended substantially horizontally from the upright.

A pivot bolt 31 is extended transversely through the strips 22 between their ends and has a brace 32 mounted at one end thereon while the other end of the brace is extended between and detachably secured to spaced hangers 33. These hangers are joined at their upper ends to strips 22 and block 24 by a bolt 34 while the other ends of the hangers are connected to the brace 32 by a bolt 35.

Extending transversely through the strips 22 adjacent to the spacing block 23 is a bolt 36 on which is pivotally and slidably mounted the lower end portion of a standard 37, the upper end of which is forked as shown at 38. This standard, which can be made up of parallel angle members, as indicated in Fig. 4, has longitudinal slots 39 in its lower end through which the bolt 36 extends. When the standard 37 is in upstanding position substantially perpendicular to the side strips 22 of the platform support, the upper end walls of the slots 39 will bear downwardly on the bolts 36 while the adjacent portions of the standard will be fitted tightly between the bolt and the spacing block 23. Consequently the standard 37 will be locked in upstanding position. However, by lifting the standard relative to the bolt 36 the lower end of the standard, which is rounded as indicated at 40, can clear the spacing block 24 as shown by full lines in Fig. 3 so that it thus becomes possible to swing the standard 24 downwardly into the frame formed by the connected side strips 22 and into the space above the bolt 31. By disconnecting the hangers 33 from brace 32 the brace can be swung in the direction indicated by the arrow *a* in Fig. 3 until it assumes a position within the frame defined by the side strips 22 and as indicated by broken lines in said figure. After this brace has thus been located, the hangers 33 can be swung into position upon the outer sides of the members 22 and there held by reinserting the bolt 35 through the hangers 33 and through openings 41 provided in the members 22. Thus the

hangers will be held in the position indicated by broken lines in Fig. 3. It might here be stated that when the standard 37 is folded into the frame of the support the forks 38 will drop into the frame and opposite sides of the screw 29 and between jaw 26 and block 30. Thereafter the jaw 26 can be fed toward the block 30 so as to enter the forks 38 and thus hold the standard in folded position. It is thought that this operation will be clear from a careful consideration of Figures 2, 3 and 4 of the drawings.

When it is desired to use the structure constituting the present invention the wall engaging brackets are secured to the wall at predetermined distances apart and at substantially the same elevation above the ground. An upright U is then placed in engagement with each of these brackets and will be supported on the surface thereunder as shown in Fig. 1. Before these uprights are thus located the supporting frames which include the connected side strips 22 are mounted on the respective uprights. Said frames are then slid along the uprights to the points where they are to be secured, the jaws 26 are adjusted to grip the uprights, and the hangers 33 are secured to the braces 32. The act of tightening each jaw 26 of course shifts its screw out of engagement with fork 38 so that the standards on the two frames 22 thus can be swung to upright positions and then lowered while in such positions so as to become locked by gravity.

A hand rail 42 can then be lowered into the forks as shown in Fig. 1 and the erection of the scaffolding is then completed and all that is required is to place a platform member in the form of a plant P or the like on the supporting frames 22.

Obviously frames 22 can readily be adjusted upwardly or downwardly along the uprights to change the elevation of the platform as the work progresses.

If it should be desired at any time to anchor the upper portion of a ladder to the wall, the frame 22 under the selected attached bracket can be lowered out of the way and the upper end portion of the ladder L can be inserted between sleeves 16 and 20. The links 18 will of course permit angular adjustment to allow for free insertion of the ladder between the sleeves. When the scaffolding is not in use the frame 22 can easily be lowered, disconnected from the upright and folded as already explained so as thus to occupy minimum space. The attaching brackets can be disconnected from the wall simply by lifting their forks 5 from engagement with the anchoring means 6 after which, by detaching the bolts 2 and 4, parts of this bracket can be compactly arranged for storing or for transportation.

The entire structure is very simple, durable and efficient and is especially advantageous because of the fact that it can be transported readily and requires the use of the minimum amount of lumber in the erection of a scaffold.

What is claimed is:

1. A scaffolding including an upright, an arcuate body strip having wall engaging terminals, means secured to said strip for detachably holding the terminals pressed against an engaged wall, oppositely disposed angularly adjustable members carried by the strip and positioned for thrusting engagement against said wall, means carried by the body strip for embracing the upright, and means adjustably mounted on the upright for supporting a platform.

2. In a scaffolding an attaching bracket including an arcuate body strip, opposed arcuate strips adjustable longitudinally on the opposed portions of the body strip respectively, separate means carried by all of the strips for thrusting engagement with a wall or the like, means carried by the body strip and between its ends for detachable engagement with an anchoring element, and means connected to the body strip for joining an upstanding element to the bracket.

3. In a scaffolding an attaching bracket including an arcuate body strip, opposed arcuate strips adjustable longitudinally on the opposed portions of the body strip respectively, separate means carried by all of the strips for thrusting engagement with a wall or the like, means carried by the body strip and between its ends for detachable engagement with an anchoring element, means connected to the body strip for joining an upstanding element to the bracket, said means including side members connected to the terminals of the body strip, a yoke secured to the body strip and between the side members, and

separate relatively movable members connecting the side members to each other and to the yoke.

4. In a scaffolding the combination with an upstanding member and means for detachably joining said member to a wall or the like, of a platform support embracing the member, cooperating fixed and movable jaws carried by the support and engaging opposed faces of the member, normally connected means foldable relative to each other and to the support for normally holding said support at a fixed angle relative to the upstanding member, a standard pivotally connected to the support and foldable thereunto, means on the standard for detachable engagement by a hand rail, gravity controlled means for holding the standard in an upstanding position relative to the support, and an adjusting screw in the support for actuating the movable jaw, said screw constituting means, when in jaw releasing position, for holding the standard in folded position within the support.

GEORGE WILBUR WETZEL.