

W. C. GAW.
SCAFFOLD.
APPLICATION FILED AUG. 29, 1910.

1,018,043.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 1.

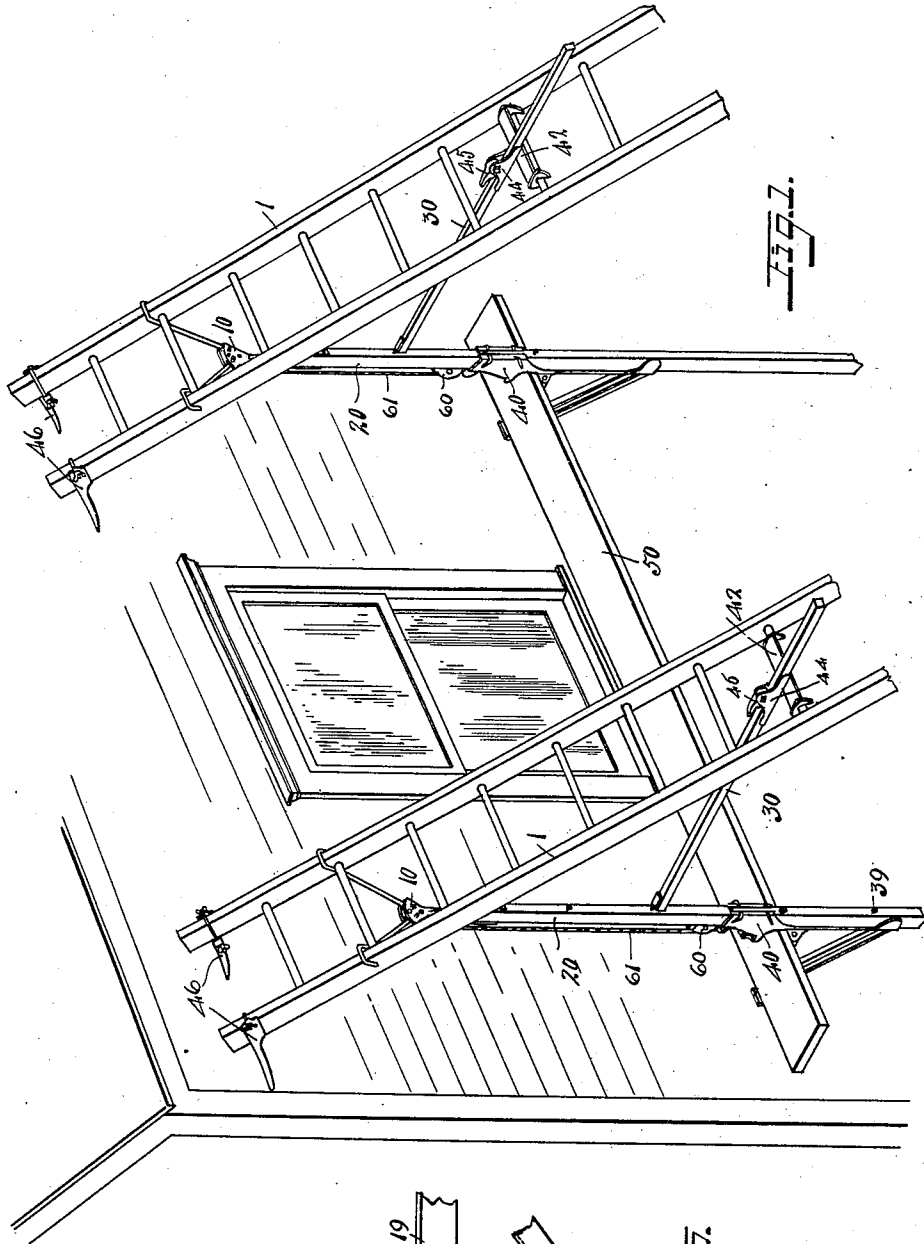


Fig. 1.

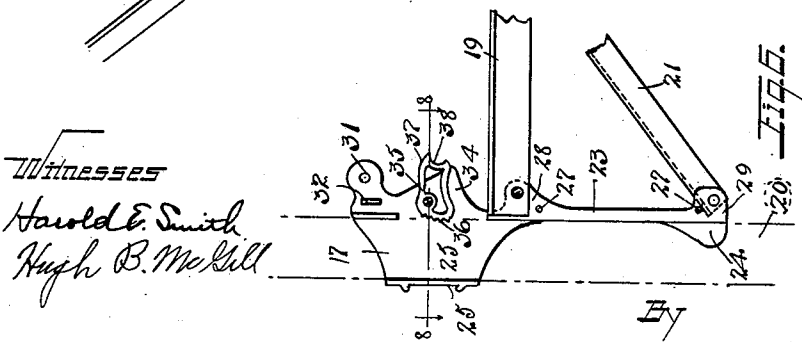


Fig. 2.

Witnesses

Harold E. Smith
Hugh B. McMill

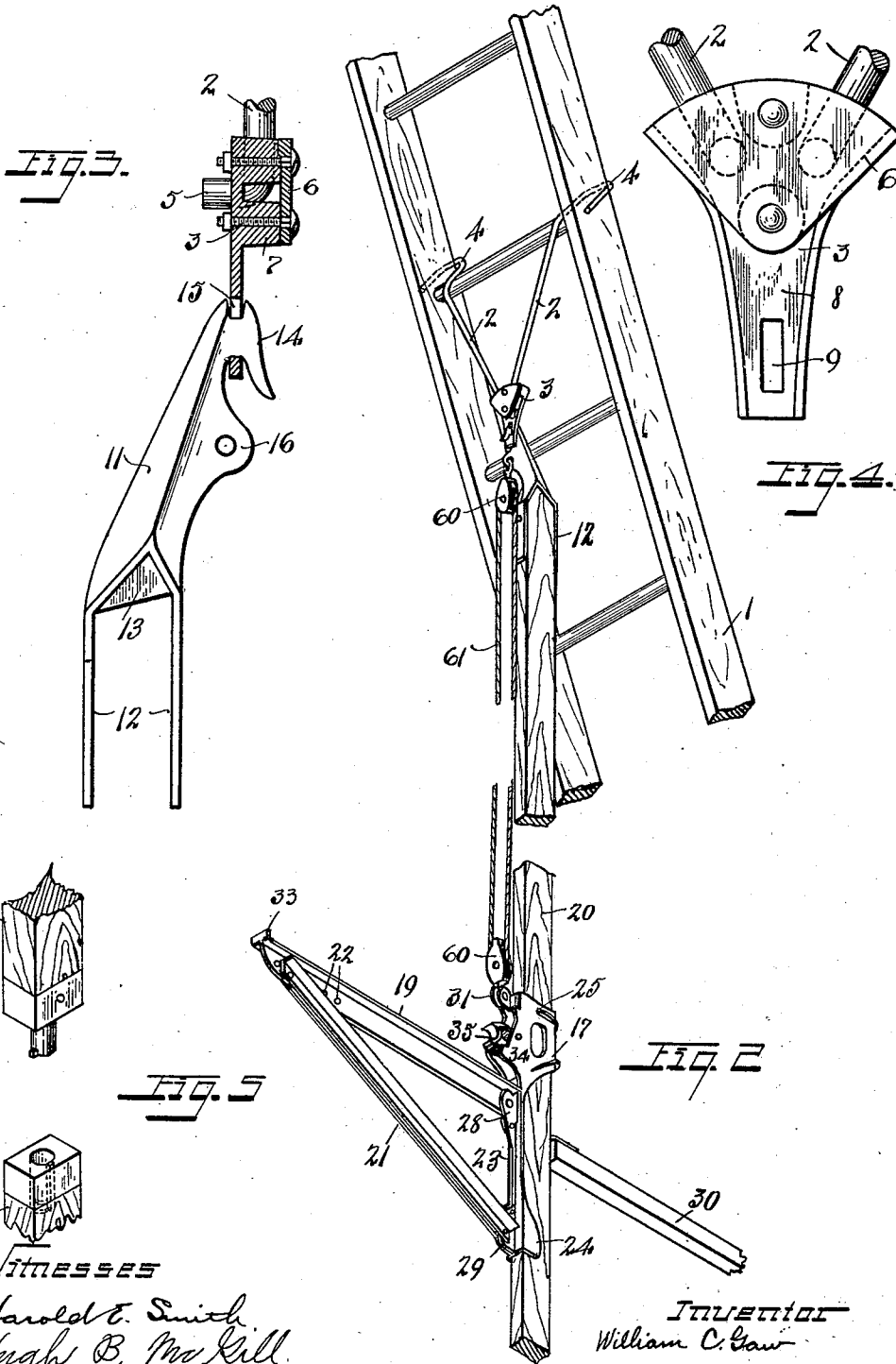
Inventor
William C. Gaw.

J. R. Hill
Attorney

1,018,043.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 2.



Witnesses

Harold E. Smith
Hugh B. McKill

Inventor
William C. Gaw

By J. B. Hull
Attorney

W. C. GAW.

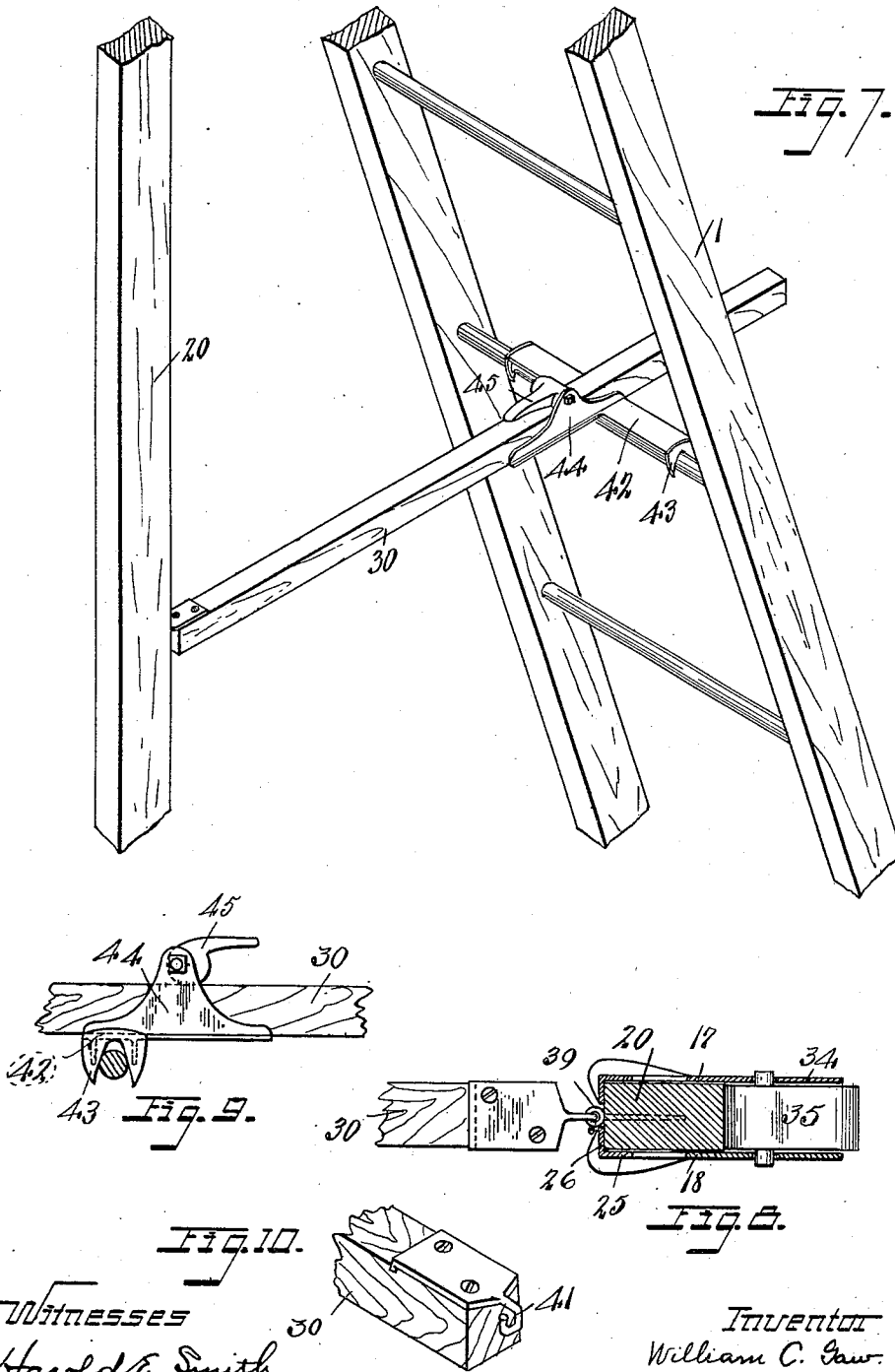
SCAFFOLD.

APPLICATION FILED AUG. 29, 1910.

1,018,043.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 3.



WITNESSES

Harold E. Smith
Hugh B. McKill

INVENTOR
William C. Gaw.

By J. B. Hull
ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM C. GAW, OF CLEVELAND, OHIO.

SCAFFOLD.

1,018,043.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed August 29, 1910. Serial No. 579,521.

To all whom it may concern:

Be it known that I, WILLIAM C. GAW, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Scaffolds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 This invention relates to a painter's swinging scaffold and has for its object to provide a device of this class which shall be very light and easily transportable and at the same time be strong, easily adjustable, 15 efficient, and inexpensive. Such a device ought to employ ladders, planks and other simple materials such as every painter necessarily possesses and avoid the necessity of buying and transporting other heavy and cumbersome apparatus. My system aims to 20 utilize these articles to their full capacity and to employ in addition thereto only a small number of simple and inexpensive parts.

25 One embodiment of my invention is illustrated in the accompanying drawings, although it will be understood that such illustration is descriptive merely and not a limitation, as many of the parts can be 30 varied and still be within the scope of my invention.

In those drawings Figure 1 is a perspective view of my complete scaffold in operative position against the wall of a house; 35 Fig. 2 is an enlarged view of the suspension and bracket; Fig. 3 a detail view of the supporting hook and a section of the suspension; Fig. 4 a detail view of the suspension; Fig. 5 a view showing the method of lengthening the pole; Fig. 6 40 a detail view of a part of the bracket; Fig. 7 a view of the bracing strut and its connection with the ladder; Fig. 8 a cross section on the line 8—8 of Fig. 6; and Figs 45 9 and 10 are details.

Referrings more particularly to the drawings and to the reference numerals thereon 1—1 represent ladders of the ordinary or any approved type inclined against the side 50 of a house and carrying suspension members 10 near their upper ends, to which suspension members poles 20 are attached. These poles hang in a vertical position at a convenient distance from the wall of the building being braced against swaying by struts 55 30 suitably secured to said ladders, and

carry slidable bracket members 40 adapted to support a plank 50 or other suitable platform in such manner as to permit easy and rapid vertical adjustment of the same by means of the pulley blocks 60 and 60 tackle 61.

The suspension means comprises iron rods 2, 2 pivoted at one end to a metal plate 3 and bent at the other end to form outwardly 65 turned hooks 4 adapted to be engaged with the side rails of a ladder, as shown in Figs. 1 and 2. These rods may be conveniently secured to the plate by bending them to a right angle at their ends as at 5 and passing 70 them through perforations in said plate, retaining them in place by a cover 6 bolted thereto and suitably spaced therefrom as by bosses 7. However, this connection might comprise merely the upsetting of the 75 ends 5 and the omission of cover 6, and I consider such a modification as within the scope of my invention. This plate is formed with a depending projection 8 having an elongated slot 9 for the attachment 80 of the pole 20.

The pole 20 carries at its upper end a hook member 11 preferably formed with two parallel depending plates 12 between 85 which the pole is secured, which plates are connected at their upper ends by a central web 13 adapted to be inserted in a saw scarf in the end of the pole for greater security. At the top this member carries a hook proper 14 adapted to engage the slot 90 in plate 8. The upper part of the hook is preferably formed with a notch 15 slightly wider than the plate as shown in Fig. 3. This construction allows the suspension member to be attached to the top of the pole 95 and hoisted into position, thus avoiding the necessity of sending a man up the ladder, since if the pole carrying the hook be vertically lifted, the hook will leave the lower portion of the slot and move upwardly 100 therein, the edges of the notch 15 embracing plate 8. The shape of hook and slot prevents the plate from falling over sidewise, and the edges of the notch hold it against falling forward or backward. The member 105 11 is also provided with a perforated lug 16 for the attachment of one pulley block 60.

The bracket consists of two side pieces 17 and 18 adapted to be secured together so as nearly to surround the pole, an arm 19 110 pivoted thereto and extending at about right angles therefrom and a brace 21 pivoted

below said arm and adapted to support it in any one of several positions by means of a bolt passed through one of the holes 22. Each of the side pieces 17 and 18 comprises a straight flat bar 23 substantially half the width of the pole and carrying at its lower end a guiding plate 24 adapted to slide against one side of the pole, and having at its upper end a flat plate 25 covering the whole side of the pole and having a lip 26 bent around to engage and partially cover the rear face of the pole. The two side pieces 17 and 18 are oppositely symmetrical and are adapted to embrace and slidably engage the pole when assembled and fastened together by bolts or rivets 27 passing through cooperating perforated lugs 28 and 29 formed on the bars 23. At their upper ends the bars 23 are provided with perforated lugs 31 sufficiently removed from the abutting edges of the bars to allow the eye of a pulley block 60 to be bolted therebetween as shown in Fig. 2. Bosses 32 may be formed on the side pieces to prevent binding.

The arm 19 is preferably made of a bar of T iron and may conveniently be attached by pivoting the vertical flange thereof between the lugs 28 which are slightly separated for this purpose, as shown in Figs. 2 and 6. This flange may be cut away short of the other end of the arm and the horizontal flange turned up as at 33 to prevent the plank from sliding off. The brace 21 is conveniently formed of two pieces of angle iron pivoted on opposite sides of the lugs 29 by a single bolt and attached to opposite sides of the vertical flange of the arm 19 by another bolt. Immediately above this arm the side plates 25 are extended to form lugs 34 between which a cam 35 is pivoted, said cam having a serrated face 36 for engaging the pole and a handle 37 for operating the same. I have shown the handle as provided with a notch 38 for receiving the toe of the workman's boot, though other forms may obviously be employed.

At intervals along its rear surface the pole 20 is provided with screw-eyes 39 or the like to which the strut 30 may be connected by means of a hook 41 attached to the end thereof. This strut extends from the pole in an approximately horizontal position to its engagement with the ladder as shown in Figs. 1 and 7. This engagement with the ladder I prefer to effect by the means shown in Figs. 7 and 9, in which a plate 42 carries down-turned hooks 43 at each end adapted to engage the rung of a ladder, and also carries a channel piece 44 on its upper surface through which the strut extends and in which it may be clamped by means of the cam 45.

I form the lower end of the pole 20 with a joint such as is shown in Fig. 5 in order

that the pole may conveniently be lengthened, and to avoid the necessity of handling long poles. At the top of each ladder I may employ feet 46 attached thereto in any convenient manner to afford more space between the scaffold and the building.

In operation the ladders are set in an inclined position against the wall of a building, the suspension bracket 10 is attached to the top of pole 20 and elevated into position, the struts are adjusted preferably within reach of the ground, the brackets 40 slipped over the lower ends of the poles, the plank 50 laid thereon, and the whole elevated to position by means of the block and tackle. When at the proper height the painters take their places thereon, care being taken to see that the cams 35 are engaged. There is no need of securing the tackle 61, as the cam alone offers perfect security. When the surface, readily accessible from the scaffold, has been covered, one workman takes his stand at each pole, releases cam 35 with his foot, and operates the platform the desired distance. In case only one man is present, he can operate the device by lowering the ends alternately by shorter steps.

If the house has a projecting cornice or overhanging eaves, the ladders may be supported directly thereagainst and still allow room for the workmen between them and the wall. If not, the feet 46 at the upper ends of the ladders must be employed. In order to further separate the platform from the wall I also prefer to incline the hook member 11 carried by the pole, as shown in Figs. 2 and 3. In case the surface to be painted is not vertical, the struts may be adjusted to hold the poles in an inclined position parallel to the surface, and the arm 19 of the bracket 40 adjusted to hold the platform level. This feature is particularly desirable in connection with a Mansard roof, since it permits ready access to all parts of the sharply sloping lower section thereof.

In case the wall is too high for a single pole to reach, other poles may be joined thereto and the whole wall painted without moving the ladders. If found desirable, several struts may be used to brace the poles at different points, but it is usually sufficient to employ only one, keeping it rather close to the ground. Any number of ladders and poles can be employed at one time, suitably spaced apart and covering the whole side of a building with a single setting.

Another advantage of my invention is that it requires no base support near the building, thus adapting the scaffold for use above piazza roofs, and in locations, where steps, depressed windows, or shrubbery impede the employment of other devices. A further advantage of this inclination is that it brings the point of support more directly above the heads of the workmen, and acts, in

conjunction with their weight to render the pole vertical.

Having thus described my invention, what I claim is:—

5 1. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a straight rigid member adapted to be attached to the side rails of said ladder at their upper ends and to de-
10 pend therefrom, rigid means adapted to connect the lower portion of said depending member with laterally separated portions of said ladder to prevent swaying of said
15 depending member and to hold the same parallel to the said wall, a bracket adapted to be slidably mounted upon said rigid depending member, and to support a platform, means for adjusting the position of said
20 bracket, and means for retaining said bracket in adjusted position.

2. A swinging scaffold comprising in combination, a ladder adapted to be inclined against a wall, a straight rigid member, a supporting member carried by said rigid
25 member and having an inclined shank terminating in a downturned hook, a suspending member adapted to be attached to said ladder and having an opening adapted to receive said hook, a rigid brace adapted to
30 connect a lower portion of said rigid member with a corresponding portion of said ladder, a bracket adapted to be slidably mounted upon said rigid member and to support a platform, means for adjusting the
35 position of said bracket, and means for retaining said bracket in adjusted position.

3. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a plate having means by
40 which it can be suspended from said ladder and having an elongated vertical slot, a straight rigid member having a hook at its upper end adapted to take into the lower part of said slot, said hook being adapted
45 to engage and securely hold said plate by engagement with the upper part of said slot, and means slidably adjustable upon said rigid member for supporting a platform.

50 4. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall, a plate having out-turned hooks adapted to be engaged with the side rails of said ladder, and having an elongated
55 vertical slot, a straight rigid member having a hook at its upper end adapted to take into said slot, said hook having a notch in its upper surface adapted to engage and securely hold said plate, and means slidably adjustable upon said rigid member for
60 supporting a platform.

5. A swinging scaffold comprising in combination a ladder adapted to be inclined against a wall and having a foot at its upper
65 end adapted to space the same from said

wall, a straight rigid member having a hook at one end, said hook having an inclined shank whereby it is offset from said rigid member, a plate adapted to be supported from said ladder and having an aperture
70 adapted to receive said hook, a rigid brace adapted to connect a lower portion of said rigid member with a corresponding portion of said ladder, a bracket adapted to be slidably mounted upon said rigid member and
75 to support a platform, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted position.

6. A swinging scaffold comprising in combination a straight rigid member adapted to be supported in an upright position adjacent and parallel to the wall of a building, laterally projecting attaching means carried by said rigid member at a point below the upper end thereof, a rigid brace
85 adapted to be attached to said attaching means and to extend laterally therefrom, a bracket adapted to be slidably carried by said rigid member, said bracket comprising side pieces adapted to partially surround
90 said rigid member, said side pieces being spaced apart a sufficient distance to permit them to be slid past said attaching means, means for attaching said side pieces together, an arm pivoted to said side pieces, a
95 brace pivoted to said side pieces at a point below said arm and supporting the same, a cam pivoted between said side pieces and adapted to engage said rigid member, a pulley block attached to said side pieces, and a
100 second pulley block attached to the top of said rigid member and adapted to cooperate with said first-mentioned pulley block.

7. In a swinging scaffold, in combination, a metallic plate having an aperture, arms
105 having right angle ends pivoted to said plate and having out-turned hooks adapted to engage the side rails of a ladder, a cover plate spaced from said first plate and engaging the opposite side of said arms to prevent their disconnection from said first
110 plate, a straight rigid member having a hook at one end adapted to take into said aperture, a bracket adapted to be slidably mounted upon said rigid member, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted
115 position.

8. A swinging scaffold comprising, in combination, a ladder adapted to be inclined
120 against a wall, a straight rigid member adapted to be attached to said ladder at its upper end and to depend therefrom, a brace adapted to be attached to said rigid member near its lower end, an adjustable clamp carried
125 by said brace and having a pair of separated hooks adapted to engage a rung of said ladder near the side rails thereof whereby side-swaying of said rigid member may be prevented, and means slidably adjustable
130

upon said rigid member for supporting a platform.

9. A swinging scaffold comprising, in combination, a supporting member adapted to be inclined against a wall, a straight rigid member adapted to be attached to said supporting member and to depend therefrom, a bracket adapted to be slidably mounted upon said straight rigid member and having side plates and lips partially surrounding the same, a brace adapted to be attached to said supporting member, attaching means carried by said straight rigid member in the part not surrounded by said bracket and adapted to receive said brace, and means for retaining said bracket in adjusted position upon said rigid member.

10. In a swinging scaffold, in combination, a metallic plate having an aperture,

arms pivoted to said plate and having outward turned hooks adapted to engage the side rails of a ladder, means limiting the outward swinging of said arms, a straight rigid member having a hook at one end adapted to take into said aperture, said hook being so formed as to securely engage said plate, a bracket adapted to be slidably mounted upon said rigid member, means for adjusting the position of said bracket, and means for retaining said bracket in adjusted position.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

WILLIAM C. GAW.

Witnesses:

HAROLD E. SMITH,
OLIVER M. KAPPLER.

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