

Sept. 27, 1932.

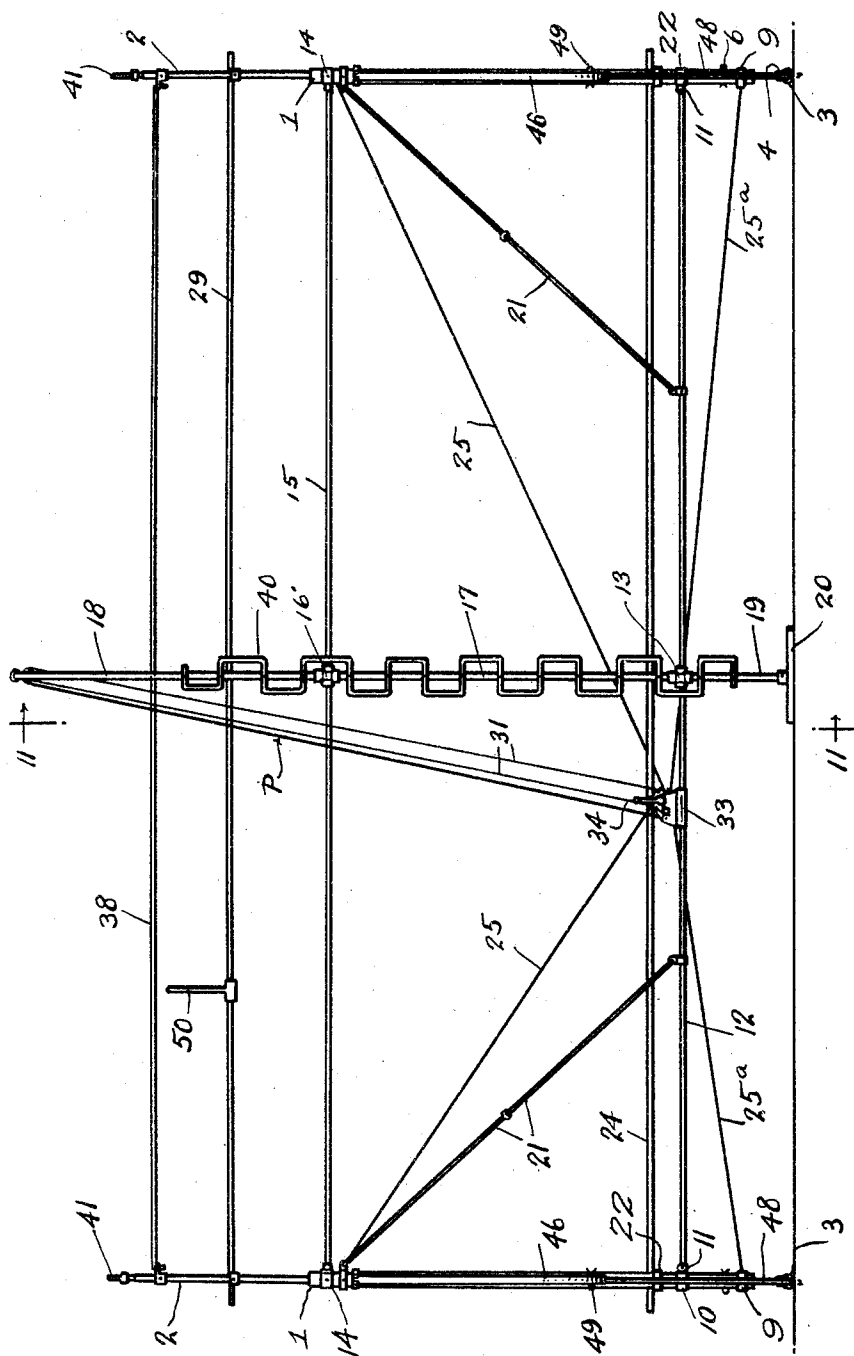
J. H. McMINN

1,879,376

SCAFFOLD

Filed Jan. 5, 1931

5 Sheets-Sheet 1



Inventor

J. H. McMinn

By *Clarence A O'Brien*
Attorney

Sept. 27, 1932.

J. H. McMINN

1,879,376

SCAFFOLD

Filed Jan. 5, 1931

5 Sheets-Sheet 2

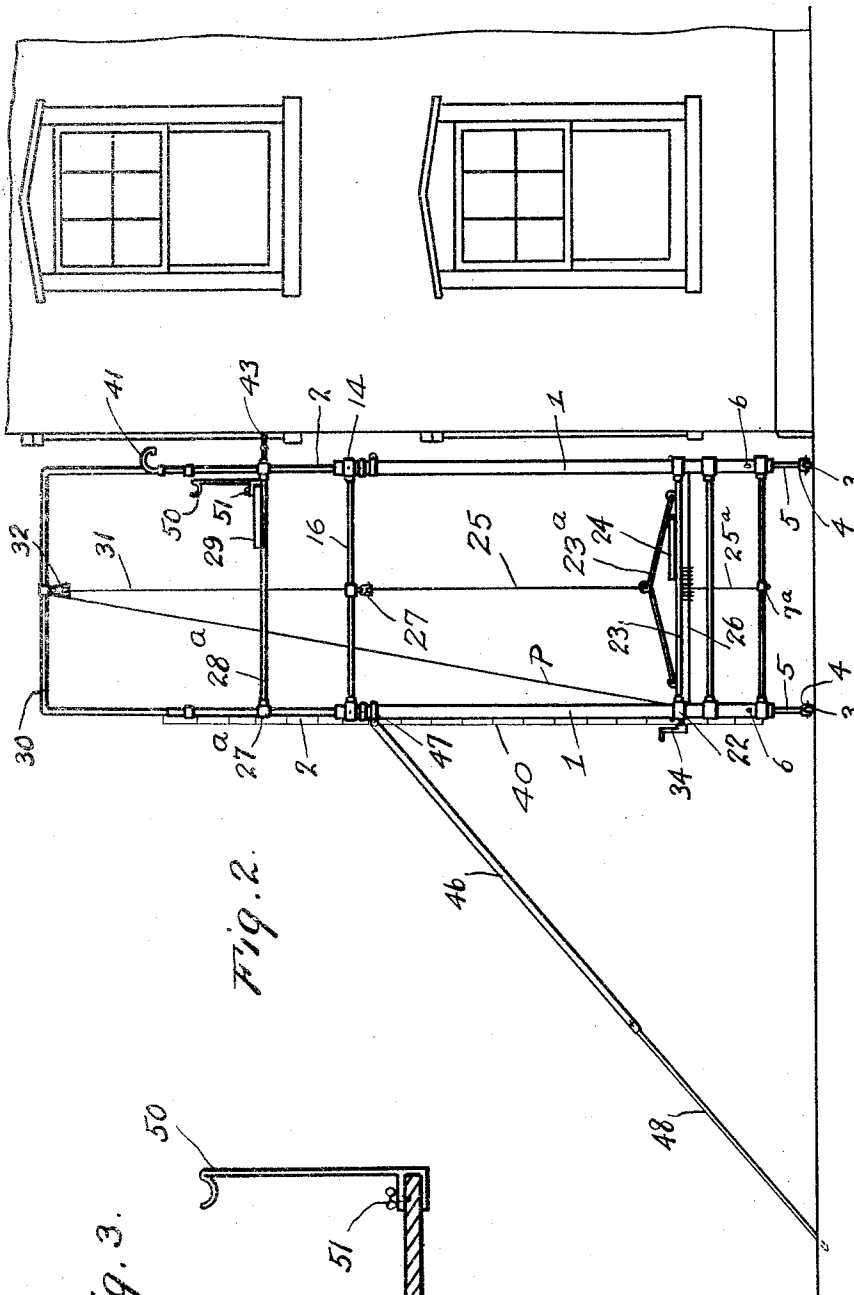


Fig. 2.

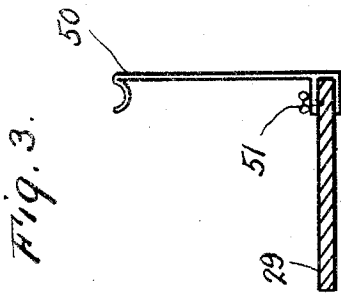


Fig. 3.

Inventor

J. H. McMin

By *Clarence A. O'Brien*
Attorney

Sept. 27, 1932.

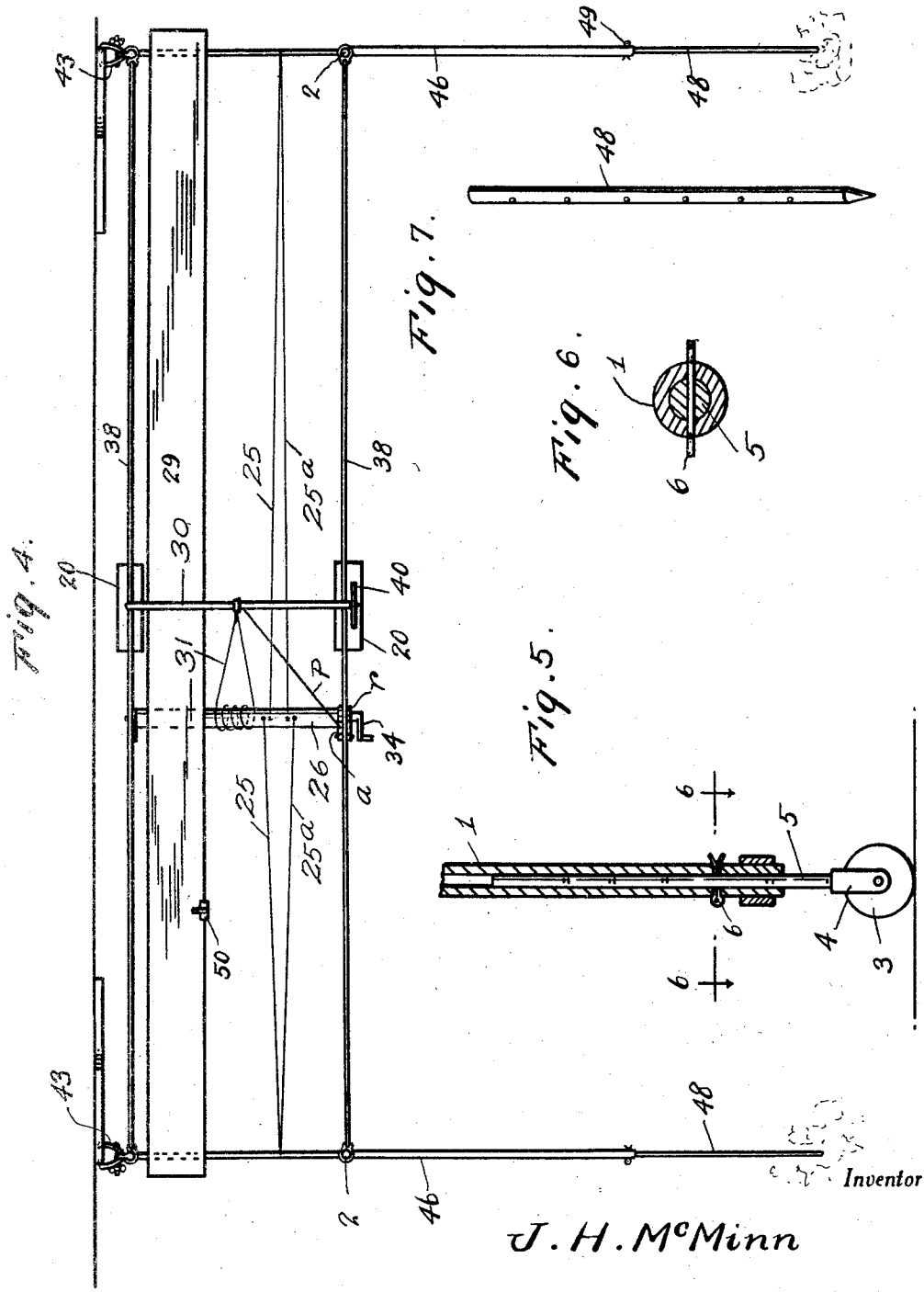
J. H. McMINN

1,879,376

SCAFFOLD

Filed Jan. 5, 1931

5 Sheets-Sheet 3



J. H. McMinn

By *Clarence A. O'Brien*
Attorney

Sept. 27, 1932.

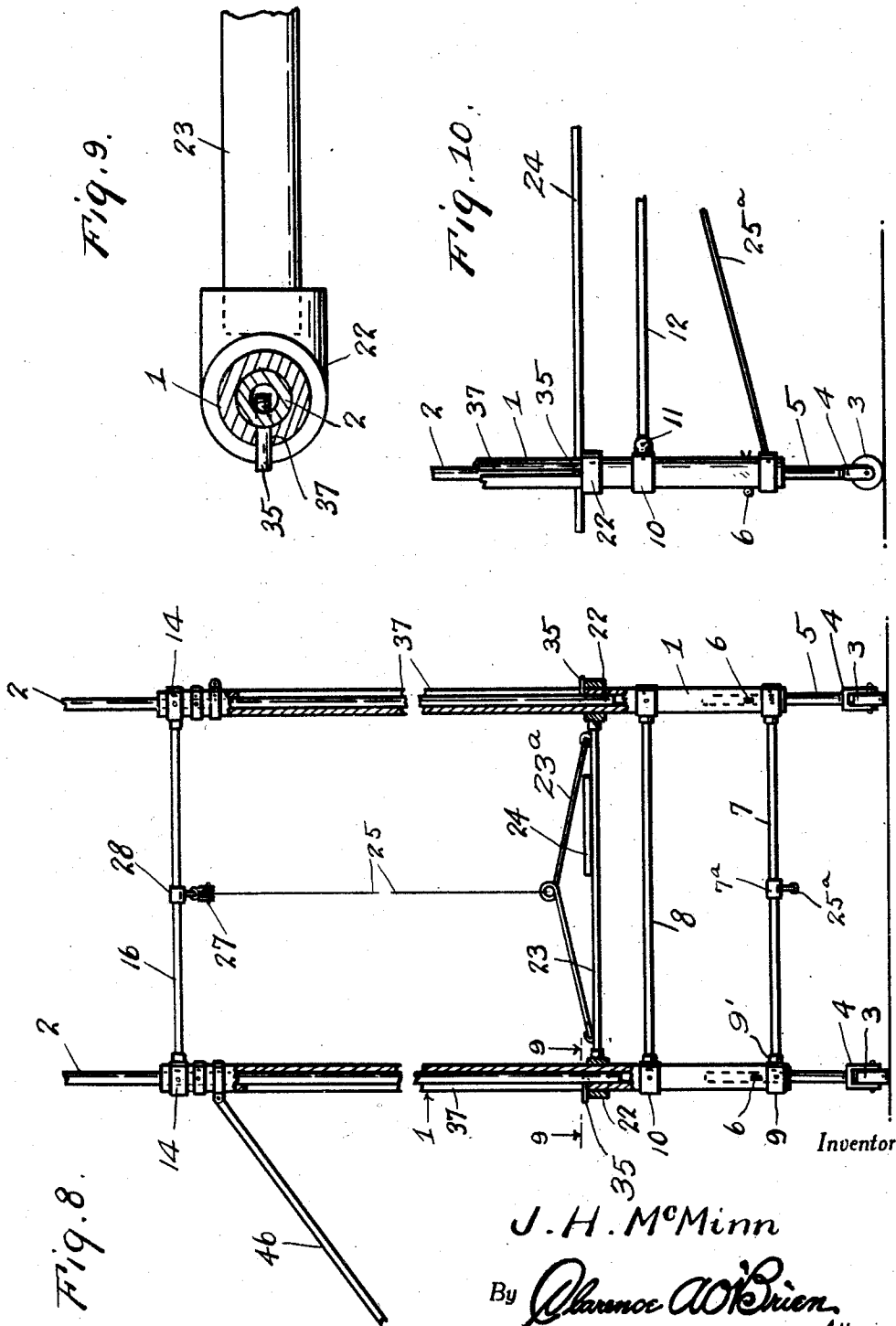
J. H. McMINN

1,879,376

SCAFFOLD

Filed Jan. 5, 1931

5 Sheets-Sheet 4



Sept. 27, 1932.

J. H. McMINN

1,879,376

SCAFFOLD

Filed Jan. 5, 1931

5 Sheets-Sheet 5

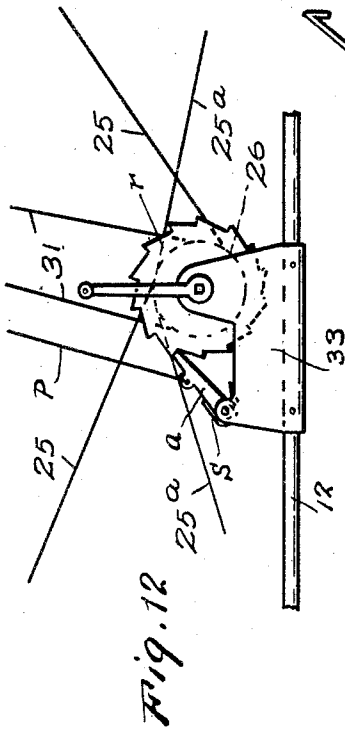


Fig. 12



Fig. 13

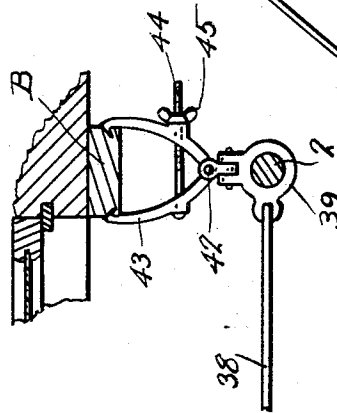


Fig. 14

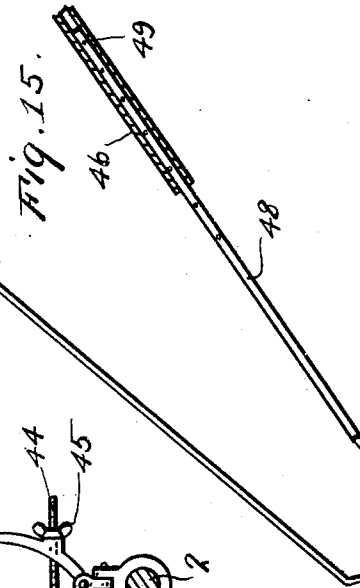


Fig. 15

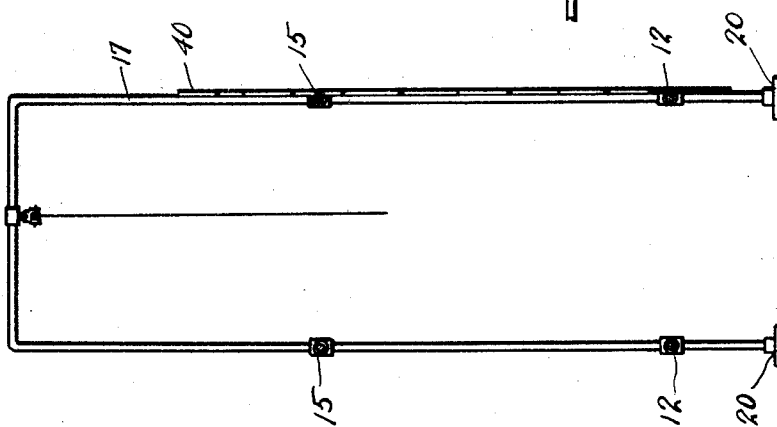


Fig. 11

Inventor

J. H. McMin

By *Clarence A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

JULIAN H. McMINN, OF NORENE, TENNESSEE

SCAFFOLD

Application filed January 5, 1931. Serial No. 508,773.

This invention relates to new and useful improvements in scaffolds and the primary object of this invention is to provide a scaffold that is capable of vertical adjustment for positioning the walkboard of the scaffold at any desired height.

A still further object of the invention is to provide a scaffold provided with upper and lower walkboards, together with means for simultaneously raising and lowering the boards.

A still further object of the invention is to provide a scaffold of the character above suggested, wherein the parts of the scaffold may be readily and easily assembled and as easily disassembled, and which can be readily moved about from place to place.

A still further object of the invention is to provide a scaffold of the character above described provided with means for effecting a raising and lowering of the walk boards by a single operator, and with but a minimum amount of labor.

A still further object of the invention is to provide a scaffold of the above mentioned character which when assembled will provide a safe and durable structure.

Other objects and advantages of the invention will become apparent during a study of the following description, taken in connection with the accompanying drawings wherein;

Figure 1 is an elevational view of the scaffold.

Figure 2 is an end elevational view of the same.

Figure 3 is a transverse sectional view taken through a walk board, the same being shown provided with a bucket suspension hook.

Figure 4 is a top plan view of the scaffold.

Figure 5 is a fragmentary detail sectional elevational view of a corner post.

Figure 6 is a horizontal transverse sectional view taken substantially on the line 6—6 of Figure 5.

Figure 7 is a perspective view of a brace spike.

Figure 8 is a fragmentary detail sectional elevational view of one end of the scaffold

illustrating certain details of construction to be hereinafter more fully referred to.

Figure 9 is a transverse sectional view taken substantially on the line 9—9 of Figure 8.

Figure 10 is a fragmentary elevational view of a corner portion of the scaffold.

Figure 11 is a vertical transverse sectional view taken substantially on the line 11—11 of Figure 1.

Figure 12 is an elevational view of the dog and ratchet means for operating the cable.

Figure 13 is a fragmentary detail sectional elevational view showing the means of applying a clamp to a part of a building in accordance with the present invention.

Figure 14 is a perspective view of a hand rail.

Figure 15 is a fragmentary sectional elevational view of a brace forming part of the invention and showing the application of the spike shown in Figure 7.

With reference more in detail to the drawings, it will be seen that there is provided a plurality of longitudinal extensible corner posts arranged in rectangular formation and respectively including a tubular section 1 slidably receiving therein a rod section 2. Each corner post is supported on a roller 3 journaled in a fork 4 having a shank 5 longitudinally adjustable in the lower portion of the corner post section 1. Shank 5 is provided with a series of vertically spaced apertures adapted to selectively register with transversely aligned apertures in the lower end of the section 1 for accommodating a cotter pin 6 whereby shank 5 is secured at the desired adjustment.

At each end of the scaffold, the corner posts have the lower ends of the sections 1 connected by cross rods 7, and the ends of the rods 7 are suitably secured in sockets 9 integral with sleeves 9 provided at said ends of the sections 1. Parallel to the rods 7 are upper cross rods 8 that also have their ends suitably secured in sockets radiating from collars 10 fixedly secured to the post sections 1 above the sleeves 9.

Each of the collars 10 has pivotally connected thereto as at 11 one end of a horizontal

longitudinal rod 12. Longitudinally alined rods 12 have adjacent ends connected by a cruciform coupling 13.

Thus it will be seen that end rods 8 and side rods 12 provide a rectangular frame at each corner of which is located a corner post. The section 1 of each corner post adjacent the upper end of the section is provided with a fixed collar 14 that has projecting radially therefrom a pair of sockets disposed at substantially right angles to each other. Each collar 14 has suitably fixed in one socket thereof one end of an upper longitudinal bar 15, and alined bars 15 at their adjacent ends are connected together by a cruciform coupling 16'. Upper transverse rods 16 have their ends suitably secured in the remaining sockets of the collars 14. Rods 15 and 16 thus brace the upper end of the corner post section 1 with respect to each other.

Vertically alined cruciform couplings 13 and 16' are connected by vertical rods 17 and each rod section 17 is in alinement with a vertical rod section 18 rising from the upper branch of the cruciform coupling 16' on a corresponding side of the scaffold. Each cruciform coupling 13 has secured to its lower vertical branch the upper end of a rod section 19 which section 19 at its lower end is provided with a foot 20 normally engaging the ground.

Each corner post section 1 is braced with respect to a rod 12 adjacent thereto by a suitable brace 21, which includes hingedly connected sections as shown. Slidable on each section 1 of the corner posts is a collar 22 and the collars 22 at opposite ends of the scaffold are connected in pairs by cross rods 23. Rods 23 support therebetween a lower walk board 24. Suitably secured to each bar 23 is a cable anchor 23a. A pair of cables or ropes 25, each has one end connected to a drum 26 and these cables extend in relatively opposite directions and are trained over the pulleys 27 supported on upper cross rods 16 by suitable means 28, with the terminals of said cables being anchored or secured to the eyes of the cable anchors 23a. Obviously by rotating the winch or drum 26 in the proper direction, rod 23 will be raised or lowered for raising or lowering the lower walk board 24 as may be found desirable.

Each of the sliding sections 2 has suitably fixed thereto collars 27a, and at each end of the scaffold, transversely alined collars 27a are connected by a cross rod 28a, the ends of which are suitably fitted within sockets provided in said collars 27a. Cross rods 28a support therebetween an upper walk board 29.

Rod sections 18 are connected at their upper ends by a cross rod 30. An endless cable 31 is trained over a pulley mounted in a suitable bracket 32 suspended from rod 30, and this cable 31 passes several times around the drum or winch 26 to obtain a grip on the

drum. Winch 26 is journaled between a pair of transversely alined brackets 33 supported on opposite side rail sections 12. On one end thereof winch or drum 26 is provided with a crank handle 34 whereby the winch or drum 26 may be rotated by one standing on the ground for effecting a raising or lowering of the lower walk board 24. The purpose of cable 31 is for rotating the winch 26 by one on the upper walk board 29 for effecting a raising and lowering of walk board 24 and the corner post sections 2.

The raising and lowering of the sliding post sections 2 simultaneously with the raising and lowering of the lower walk board 24 is effected in the following manner; each of the sliding posts adjacent its lower end is provided with a laterally extending pin 35 which is operable in a vertical slot 37 in that corner post section 1 receiving the particular sliding post 2. The pins 35 engage the slidable collars 22 so that obviously post sections 2 will be raised and lowered as collars 22 slide upwardly or downwardly on the corner post sections 1.

Drum or winch 26 is held against casual rotation by a dog *a* pivoted on one of the brackets 33 and normally urged by spring means *s* into engagement with ratchet *r* on one end of the drum.

A workman on upper walk board 29 may release the dog *a* by pulling on a pull rope *P* that is secured at one of its ends to the dog, and at its opposite end to rod 30 adjacent pulley hanger 32. Drum 26 will then be free to rotate upon proper manipulation of cable 31.

Extending longitudinally of the scaffold on opposite sides of the scaffold are hand rails 38, respectively provided at each end thereof with a depending extension adapted to fit in an apertured lug integral with a collar 39 fixed to the sliding post section 2 adjacent the upper end of the section.

On one side of the scaffold, alined pipe sections 17, 18 and 19 suitably support a vertically disposed ladder 40, which ladder 40 is preferably of the construction in Figure 1.

Each of the sliding post sections 2 on the side of the scaffold opposite to the side just referred to, and at the upper end of the section 2 is provided with a suitable gutter hook 41. As suggested in Figure 2, the hooks 41 are on that side of the scaffold adjacent the building upon which the work is being performed.

As shown in Figure 13, each of the collars 39 which are located on that side of the scaffold to be disposed adjacent the building, has pivotally engaged therewith as at 42 a clamp in the nature of a pair of tongs, the jaws 43 of which are adapted to clamp therebetween a suitable part of the building, the latter being designated generally by the ref-

erence character B. The jaws of the clamp are secured in clamped relation with the fixed part of the building through the medium of an adjusting bolt 44 passing through the jaws and having threadedly engaged therewith a set screw 45.

On that side of the scaffold farthest remote from the building, there is provided a pair of longitudinally adjustable braces each of which include a tubular section 46 that at its upper end is pivotally engaged with a clamp 47 disposed about the corner post section 1 adjacent the upper end of said post section. Slidable within the tubular section 46 is a section 48 which at its lower end is provided with a penetrating point for piercing the ground. Section 48 is thus in the nature of an elongated spike, and is provided with a series of longitudinally spaced openings adapted to selectively register with a pair of transversely aligned openings in the section 46 for accommodating a cotter pin 49 whereby the sections 46 and 48 may be secured in the desired adjusted position with respect to one another.

Either or both of the walk boards 24, 29 may be equipped with a suitable bucket hook 50 the shank of which at its lower end slidably engages an edge of the walk board and is secured in a desired adjusted position by suitable means 51.

Cables 25a are windable on drum 26 and are connected to hooks carried by sleeves 7a arranged fixedly on cross rods 7. Thus it will be seen, that when the device is partially dismantled, that is to say when the rods 15 are disconnected from sleeves 14 and when the walk board 29 and hand rails 38 are removed, corner posts may be swung about the pivots 11 to be disposed in a substantially horizontal position parallel to the longitudinal bars 12, cables 25a being paid out or unwound from the drum. To raise or move the corner posts into vertical position, cables 25a are wound upon the drum thus swinging the corner posts about their pivots 11 to assume the position suggested in Figure 1 or a vertical position and the remaining parts of the structure subsequently arranged in completing the assembly. When the scaffold is in readiness for use, cables 25a are disconnected from the sleeves 7a, so as not to interfere with a raising and lowering of the walk board.

From the foregoing then it will be apparent that I have devised a scaffold for use by painters, builders, decorators and the like which may be readily assembled or disassembled, can be readily and easily adjusted for positioning the walk board thereof at a desired height, and which can also be readily braced and anchored in position against casual movement in any direction relative to the wall or building, and further that the entire structure when assembled may be readily pushed from one place to the other.

Even though I have herein shown and described the preferred embodiment of the invention it is to be understood that the same is susceptible of variations, modifications and improvements coming within the scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. A scaffold comprising in combination, a pair of spaced apart cross bars, means for slidably supporting said bars, a walk board supported between said bars, a pair of cross bars disposed above the first mentioned cross bars, means for slidably supporting the second pair of cross bars, a walk board supported between the bars of said second pair, and means for effecting simultaneous sliding movement of all of said cross bars.

2. A scaffold comprising in combination, a frame provided at each corner thereof with a vertical corner post respectively including a fixed section and a vertically slidable section, a walk board, means for supporting said walk board and including elements slidably engaged with said fixed corner post sections, a second walk board, means carried by said vertically slidable corner post sections for supporting said second walk board, and means for effecting simultaneous sliding movement of said elements and said vertically slidable corner post sections.

3. In a device of the character described, oppositely disposed pairs of corner posts, a collar slidably engaging each post of each pair, a cross rod connecting the collars of the respective pairs, a walk board supported between said rods, each of said corner posts being longitudinally adjustable, and means for effecting a sliding movement of the collars simultaneously with an adjustment of said corner posts.

4. A scaffold comprising in combination, oppositely disposed pairs of corner posts, each post comprising a pair of telescoping sections, each of said sections having a collar mounted thereon, the collar on one of said sections being fixed, and the collar on the other of said sections being slidable relative to its section, a pair of upper and lower walk boards, supporting means for the upper walk board engaging the first mentioned collars, supporting means for the lower walk board engaging the movable collars, and each of said corner posts having said one section thereof provided with means engageable with the slidable collar on the other section of the post and means for securing the sections of the respective posts at the desired adjustment.

5. In a device of the class described, a corner post comprising a pair of telescoping sections, one of said sections provided with a slot, a collar slidably engaged with said one section, and a pin on the other of said

sections operable in said slot and engageable with said collar.

6. A scaffold comprising in combination, oppositely disposed pairs of corner posts, rods connecting the posts of each pair, oppositely disposed frame members pivotally connected at one end to a corner post, a drum rotatably supported between said frame members, and cables windable on said drum and connected with said cross rods for effecting a swinging movement of the corner post about their pivots during winding of the cables on said drum.

7. A scaffold comprising in combination, a frame structure including four corner posts arranged in substantially rectangular formation, oppositely disposed members connecting pairs of said corner posts, means pivotally connecting said pairs of corner posts, and means for effecting a simultaneous swinging movement of said corner posts about their pivots.

8. A scaffold comprising in combination oppositely disposed pairs of corner posts, rods connecting the posts of each pair, oppositely disposed frame members pivotally connected at each end to a corner post, means for retaining the corner posts in substantial vertical position, each of said corner posts including a relatively fixed member and a relatively slidable member, a sleeve slidable on the fixed member, a member carried by the slidable member and engaging the sleeve whereby to impart sliding movement of the sleeve to the sliding member, a rod connecting each pair of sleeves, a platform supported on said last-mentioned rods and means for sliding said sleeve on said fixed members.

9. In a scaffold, a frame including four corner posts and side members to which said corner posts are pivotally connected, collars slidable on the corner posts, rods connecting transversely aligned collars, a platform supported on said rods and movable therewith, and means for sliding said collars on said corner posts.

In testimony whereof I affix my signature.
JULIAN H. McMINN.

50

55

60

65