March 15, 1960 A. A. ANDERSON ET AL 2,928,642

SCAFFOLD BRACKET

Filed Dec. 8, 1954 3 Sheets-Sheet 1

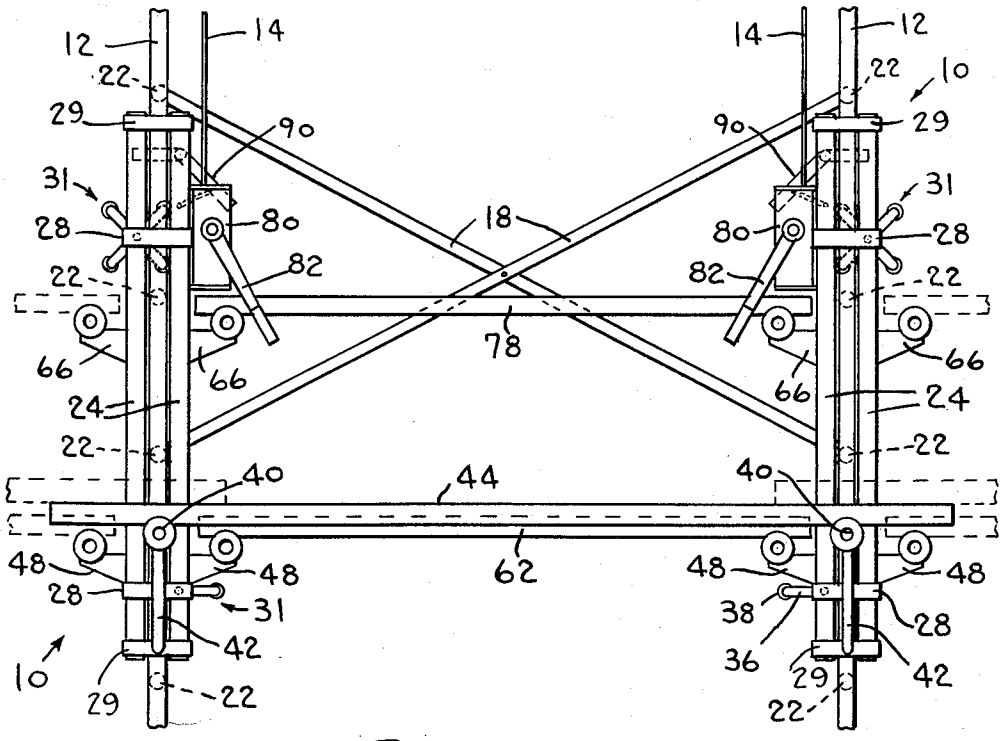


FIG. 1

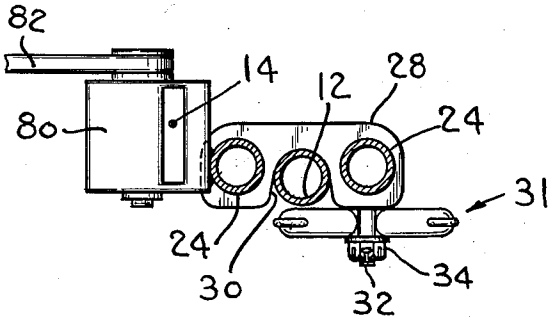


FIG. 6

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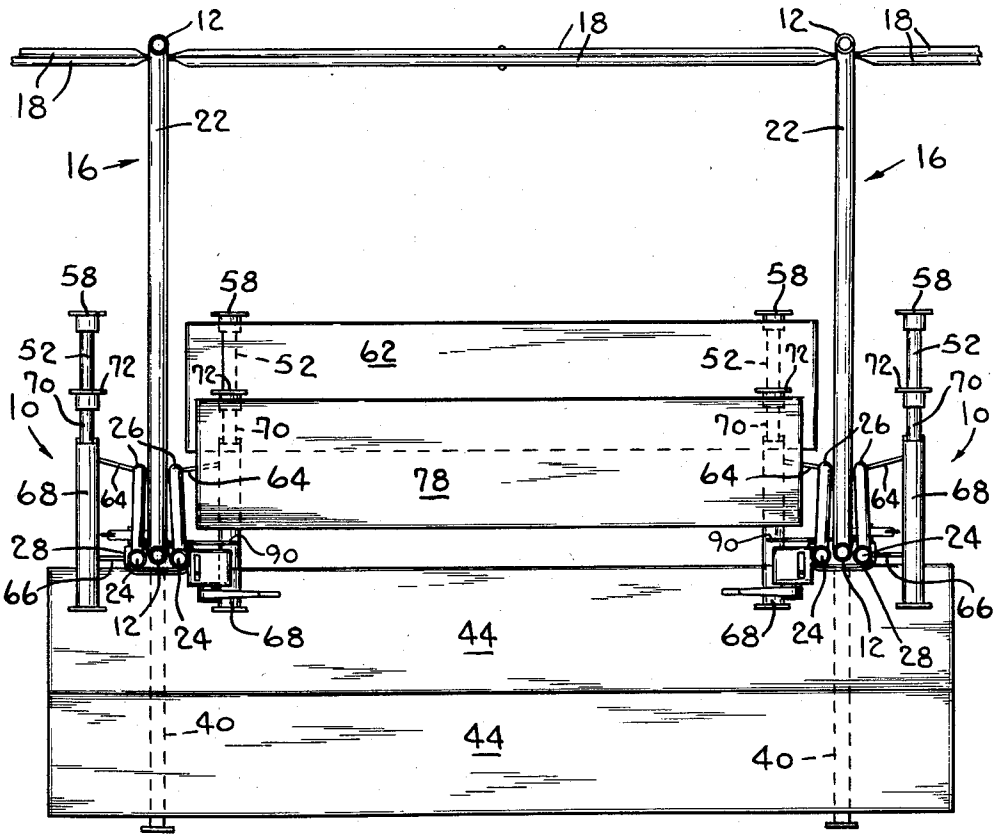


FIG. 2

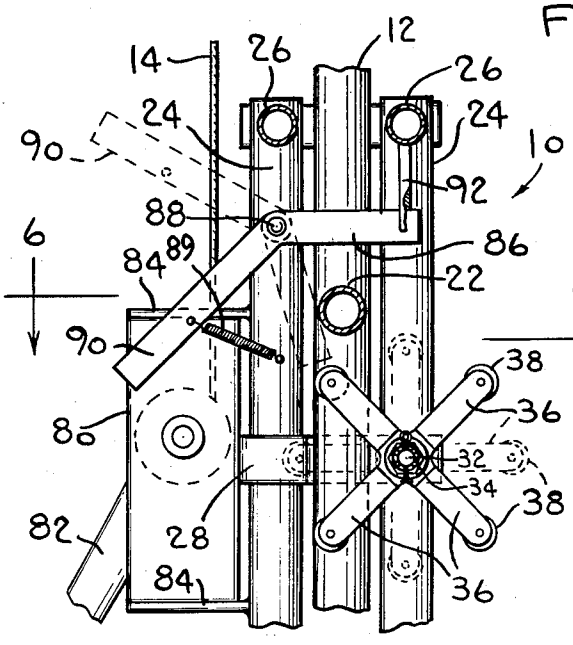


FIG. 5

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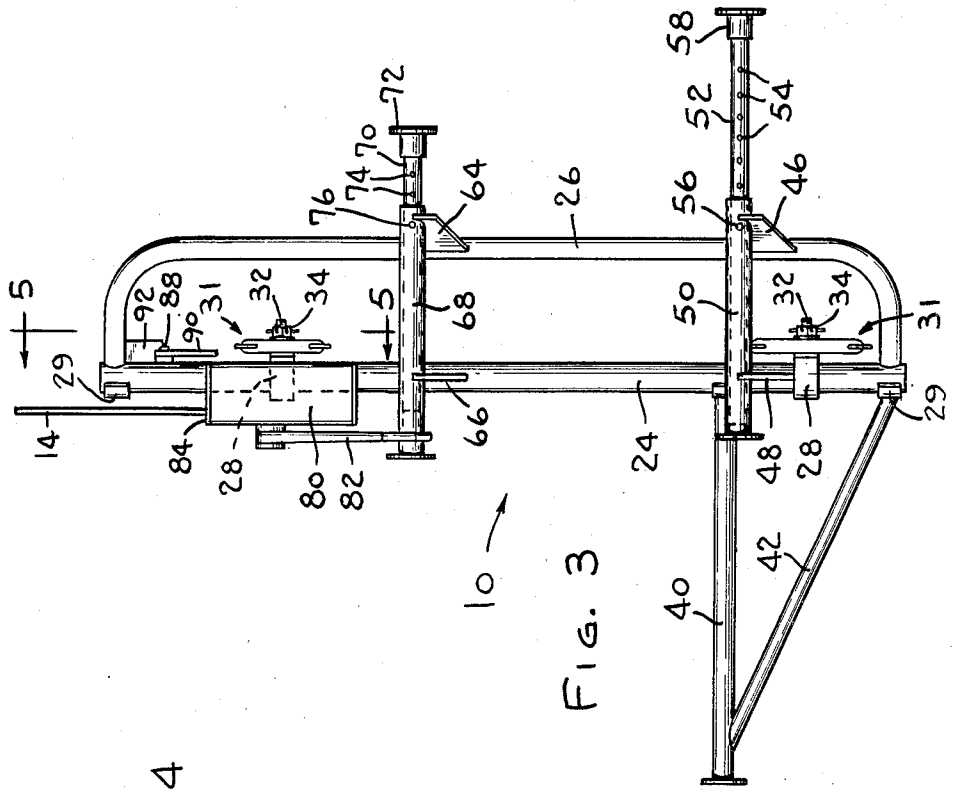
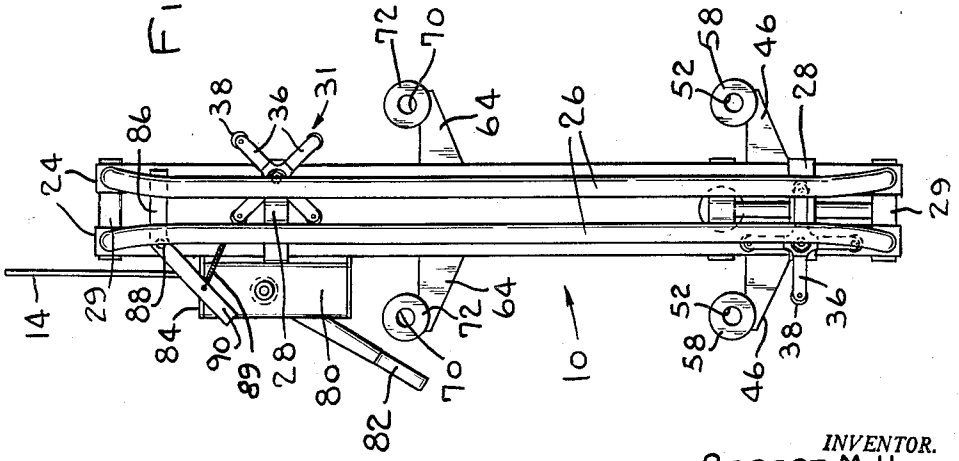


FIG. 3

FIG. 4



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SCAFFOLD BRACKET

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Application December 8, 1954, Serial No. 473,812

7 Claims. (Cl. 248—245)

This invention relates to a bracket assembly for use in connection with sectional scaffolding of the type well known today. Two or more of the present brackets are used to provide work and material platforms which may be moved vertically the height of the scaffolding while being secured thereto at all times. The bracket encloses a vertical leg of the scaffold and passes over horizontal members connected to the vertical leg without disengaging the bracket.

The principal object of this invention is to provide a safe work platform which may be used with conventional scaffolding at any height on the scaffolding without requiring release therefrom at any time.

Another object is to provide a bracket which is vertically adjustable on a leg to which are connected horizontal members over which the bracket may pass readily.

Another object is to provide a bracket of the type described which is supported by a cable, chain or the like and is elevated by a hoist mechanism carried by the bracket. The bracket is provided with a safety device to prevent free fall of the bracket if the cable should break.

Other objects and advantages will be pointed out in, or be apparent from, the specification and claims, as will obvious modifications of the single embodiment shown in the drawings in which:

Fig. 1 is a front elevation showing two brackets in use on a portion of sectional scaffolding;

Fig. 2 is a plan view of Fig. 1;

Fig. 3 is a side elevation of one bracket;

Fig. 4 is a rear view of a bracket;

Fig. 5 is a fragmentary sectional view taken as indicated by line 5—5 in Fig. 3 but with vertical leg 12 added to show the interaction of the bracket and the leg; and

Fig. 6 is a section taken on line 6—6 in Fig. 5.

Referring to the drawings now in detail, it will be seen that each bracket 10 fits on a vertical leg 12 of the sectional scaffolding and is supported by a cable or wire rope 14 which may conveniently be secured to the top of the scaffolding. The scaffolding employed here may be of any conventional type which, as is well known, generally employs end frame members 16, 16 interconnected by the scissors type braces 18. The vertical legs 12 of each end frame are interconnected by horizontal cross members 22. At least two of the horizontal cross members 22 extend from leg to leg of the end frame, while other cross members may extend only partly across to connect to intermediate vertical struts or the like. It will be noted that in the scaffolding illustrated here, the scissors braces 18 are used only on the rear portion

of the scaffold while the front portion on which the brackets ride is free of braces so as not to interfere with movement of the brackets or with the workers on the planks supported by the brackets.

In use, one bracket is employed on each vertical leg of the scaffolding which is erected adjacent a wall or the like. When this is done, a continuous work platform can be provided along the front of the scaffolding between the scaffolding and the wall and this work platform may be vertically adjusted to facilitate work on the wall. Alternatively, only two brackets can be used in connection with the scaffolding, but in this case, the work platform is only about as long as the section of scaffolding and would require frequent movement where working on a wall of considerable length. However, this type of set-up may be useful with the so-called rolling tower type of scaffolding where a vertical scaffold is built up on wheels. However, as will be apparent more fully hereinafter, the present invention is designed principally to provide a work platform where it is desired to work from the bottom up as in laying brick and the like.

Referring now to the brackets in detail, each bracket has a pair of spaced generally rectangular frame members comprised of a vertical leg 24 and a curved leg 26 welded to the vertical leg. The generally rectangular frames are interconnected by means of yokes 28 positioned near the top and bottom of the bracket assembly to provide a U-shaped notch 30 adapted to receive the vertical leg 12 of the scaffolding. Curved straps 29 fastened between the ends of vertical legs 24 of the frame add further strength thereto. It will be noted that the rectangular frames are not parallel (see Fig. 2) but converge towards each other away from the yokes. In this manner the inside surface of each frame member 26 is designed to cooperate with the horizontal members to prevent the bracket 10 from twisting about the axis of the vertical leg 12 and thus stabilize the brackets in the scaffold. It will be noted that each bracket is provided with two vertically spaced star wheels 31 which are rotatably mounted on threaded stud 32 upon which the wheels are retained by castellated nuts 34. Each star wheel has four arms 36 each of which carries a pivoted roller 38 to offer the least amount of resistance. The arms 36 are sufficiently long to prevent removal of the bracket 10 from the scaffolding leg 12 without first removing the star wheel. As can be seen in Fig. 5, at least one arm of each star overlies the space between the two legs 24 and will lie in the path of any horizontal member 22 as the bracket is raised. Since the star wheel is rotatable on its stud, the wheel will "walk" over the horizontal members 22 without disengaging the bracket from the vertical scaffold leg 12. Thus, the bracket 10 completely encloses the vertical leg and yet can pass over horizontal members connected to the leg.

A support strut 40 is connected to the front of the bracket and is reinforced by strut 42. A number of planks 44 can be laid across the horizontal members 40 of the adjacent brackets to provide a work platform which would be immediately adjacent the wall upon which it is desired to work. As shown in Fig. 1, when it is desired to extend the work platform, additional brackets (not shown) are employed on other vertical scaffold legs and the planks are laid in overlapping relationship as shown in dotted lines in Fig. 1. This will

provide a continuous work platform over as great a length as desired.

The lower portion of each bracket is provided with laterally projecting struts 46, 48 which support a sleeve 50 which in turn receives shaft 52 in telescopic fashion. This provides a support of adjustable width for planks to be carried to the rear of the bracket. The shaft 52 is provided with a number of holes 54 and the sleeve 50 is provided with a hole 56 so that the sleeve and shaft may be pinned at any desired position. It will be noted that shaft 52 is provided with a flanged head 58 similar to the flanged head 60 carried by the forward support 40 to prevent slippage of the planks from the support. As may be seen in Figs. 1 and 2, the rearwardly projecting supports 52, 50 support a plank 62 and the supports are so designed so that one is on each side of the horizontal members in the sectional scaffolding. This is done so the planks will clear the horizontal members as the brackets are raised. The rear platform 62 is designed to be used by a mason's helper.

A tubular support 68 is carried by struts 64, 66 projecting laterally from the bracket a little above the middle of the bracket and is adapted to receive shaft 70 in telescopic fashion. Shaft 70 is provided with a flanged head 72 and holes 74 which permit the shaft 70 to be pinned to sleeve 68 through hole 76 in the sleeve. This horizontal support is adapted to hold plank 78 upon which the mason's materials such as bricks, blocks, mortar and the like are piled at a convenient height. Here again, the planks do not extend from section to section, but terminate within the confines of the horizontal members 22 of the sectional scaffolding.

Each bracket is provided with a winch enclosed within housing 80 and actuated by arm 82. The cable or wire rope 14 on each bracket is secured to the top of the vertical leg on which the particular bracket rides. The winch arm 82 is actuated to raise the bracket. The winch is preferably of the ratchet type and the winch housing 80 may be pivotally mounted in the bracket 84 to permit actuation from any convenient angle. As the bracket is raised on the vertical leg 12, the star wheels will rotate to "walk" over the horizontal members 22. It will be appreciated that failure of the wire rope 14 could result in a serious accident. With this in mind, a safety dog 86 is provided. The dog 86 is pivoted on pin 88 and biased by spring 89 counter clockwise into contact with stop 92. Handle 90 can be manipulated to move the dog out of the path of the horizontals. Since the dog is pivoted, it will move out of the way as shown in dotted lines in Fig. 5 when it passes a horizontal member. Immediately on passing the horizontal member, however, the dog will return to the position shown in solid lines to arrest downward movement of the bracket should the wire rope break.

It will be appreciated that in order to lower the bracket on the sectional scaffolding, the safety dog 86 would have to be manually moved out of the path of the horizontal members 22. This is somewhat inconvenient, but when it is realized that this apparatus is principally designed for use in brick laying, this is of no serious consequence since the job has been completed when the top of the scaffolding has been reached and the usual method would be to take the brackets off the scaffold at the top of the scaffold and lower the parts by rope.

Although but one embodiment of the present invention has been illustrated and described, it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit of the invention or from the scope of the appended claims.

We claim:

1. A scaffold bracket comprising, a frame including a pair of elongated sub-frames interconnected by yokes along one side thereof to result in a frame having a generally U-shape in plan view, the inside of each yoke being adapted to ride on a vertical column, means carried by the frame for encircling the column between the means and the yoke, said sub-frames being spaced apart remote from the yoke and adapted to cooperate with horizontal members connected to the column to prevent rotation of the frame, and means carried by the bracket for supporting, raising and lowering the bracket.

2. A bracket according to claim 1 in which the means comprises a star wheel rotatably carried by the frame and having spokes of sufficient length to overlie the column in any position of the star wheel.

3. A bracket according to claim 1 including a safety dog mounted in the frame and biased to a position preventing passage of a horizontal member past the dog from below the dog as would be encountered in descent of the frame on the column, said dog being movable against the bias either manually or by a horizontal member passing the dog from above as encountered when the frame is raised on the column.

4. A bracket for use in connection with scaffolding comprising, a frame assembly including two spaced apart frame units interconnected by a yoke and adapted to receive a vertical scaffold column between the units with the yoke outside the scaffolding, means mounted on the assembly for holding the assembly to said leg, each of said units projecting from the yoke and being spaced apart a predetermined distance at the portions of the units most remote from the yoke to receive therebetween a horizontal scaffold brace to thereby prevent the assembly from rotating about the vertical scaffold column, said holding means being operative to pass over horizontal braces as the assembly is moved on the vertical column without releasing the assembly from the column, winch means carried by the assembly for raising, lowering and supporting the assembly, two brackets carried by the assembly generally parallel to said units to provide supports on each side of the plane of the horizontal and vertical scaffold members, and a bracket carried by the assembly and projecting therefrom to provide a support outside the scaffolding upon which the assembly is secured.

5. A bracket according to claim 4 in which the holding means comprises a star wheel rotatably mounted on the frame with the radially projecting arms of the wheel adapted to span the space between the units in spaced relationship to the yoke, said wheel being removable to permit removal of the frame from the column.

6. A bracket for use on scaffolding including a front vertical column having rearwardly projecting horizontal members connected thereto, said bracket including rearwardly projecting parallel frame members adapted to straddle the column and the horizontal members, means carried by the bracket for holding the bracket to the column to prevent movement of the bracket away from the column, said means normally being positioned to project into the vertically projected area of the horizontal members but withdrawing from the area to permit the bracket to move vertically on the column, and winch means carried by the bracket for supporting, raising and lowering the bracket on the scaffolding.

7. A bracket for use on scaffolding including a front vertical column having rearwardly projecting horizontal members connected thereto, said bracket including rearwardly projecting parallel frame members adapted to straddle the column and the horizontal members, vertically spaced retaining means carried by the bracket for holding the bracket to the column to prevent movement of the bracket away from the column, each of said means including a plurality of devices positioned to project into the vertically projected area of the horizontal members but withdrawing from the area to permit the bracket to move vertically on the column, at least one of the devices associated with each of the retaining means projecting into said area at all times whereby each re-

taining means maintains constant engagement with the column.

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