Sept. 30, 1958 H. J. RIBLET 2,854,291

SCAFFOLD APPARATUS

Filed Feb. 15, 1954

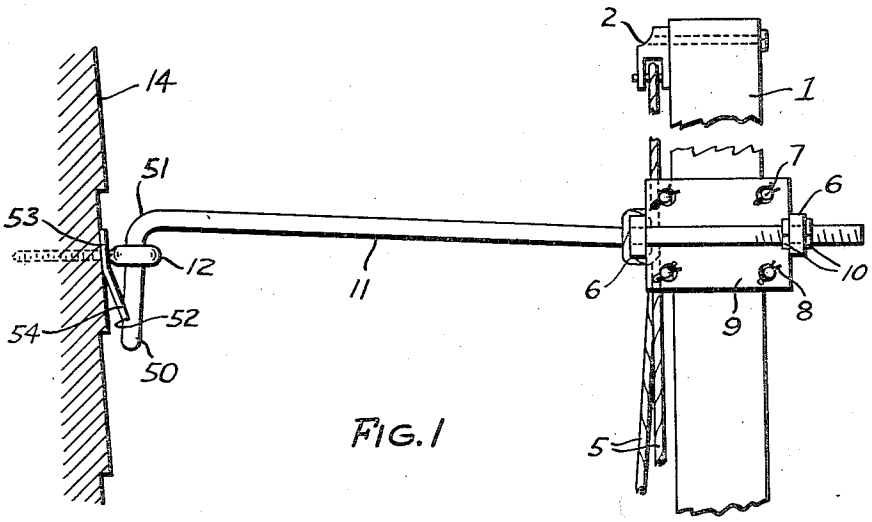


FIG. 1

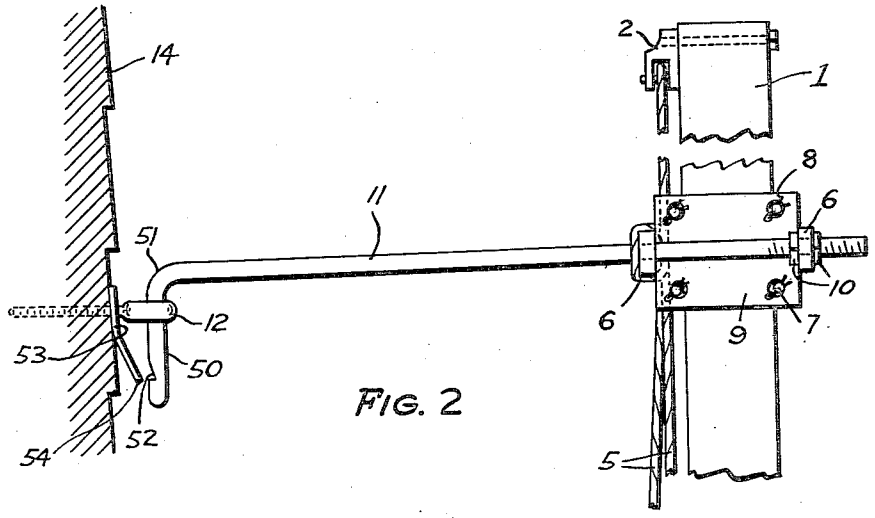


FIG. 2

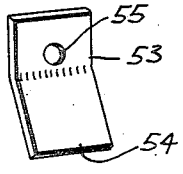


FIG. 3

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SCAFFOLD APPARATUS

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1 Claim. (Cl. 304—10)

The present invention relates generally to adjustable scaffolds and means whereby they are attached to buildings, and more particularly it relates to an improvement in the invention described in my Patent 2,244,374, entitled Scaffold Hoist, which issued on June 3, 1941.

In that patent, an adjustable bracket, or sleeve, is described which carries two rods having hooks at their extremities for engaging a pair of screw eyes previously placed in the building. Experience has shown that the safety of this scaffold is improved by providing means whereby these hooks cannot be accidentally disengaged from the screw eyes. Heretofore, this has been accomplished by drilling small holes in the ends of the hooks so that nails or cotter pins can be used to secure the hooks in the screw eyes. Although often adequate, this arrangement suffers from several disadvantages, among which is the fact that the nails or cotter pins cannot be engaged and disengaged by a workman standing on the ground, but only by a workman on the scaffold. Hence, during set-up and dismantling procedures, there were intervals when a workman was on the scaffold inserting or withdrawing these pins, without benefit of the safety intended thereby.

Accordingly, it is the object of this invention to provide locking means, which may be operated by a workman standing on the ground, whereby the hooks in question are positively anchored in the screw eyes safe from the possibility of accidental disengagement.

It is a further object of my invention to provide said locking means without any additional complication of the adjustable scaffold, and in an economical and practical manner.

In my present invention, this is accomplished by providing a suitable notch in each of the downward projecting portions of the two hooks, which is so placed that the horizontal portion of the notch will engage a suitable stop, such as a plate attached to the building with the screw eye. The engagement and disengagement of this lock will be seen to depend on the flexibility of the two rods carried by the adjustable member, the fact that the adjustable member is not a close fit on the vertical upright and may be raised and lowered from the ground by the means described in my earlier invention, and the further fact that the lower end of the vertical upright can be displaced at will toward or away from the building by a workman on the ground. Thus, the principle of operation is similar to that of a simple latch, and my invention depends on a novel combination of the elements involved.

A more comprehensive understanding of the invention will be afforded by the following detailed description considered in conjunction with the accompanying drawings, and those features of the invention which are believed to be novel and patentable will be pointed out in the claim appended hereto.

In the drawings:

Figure 1 is a side view of the upper portion of a vertical upright showing the upper slideable bracket which

supports the vertical upright to the building with one of the hooks in the locked position in the screw eye.

Figure 2 is a similar view of the upper portion of a vertical upright with the upper slideable bracket so positioned that the hook is in the unlocked position in the screw eye.

Figure 3 shows the plate which is placed under the screw eye to form the tooth portion of the latch.

Throughout the several views, the same reference numerals will be used for the similar parts, and these numerals are the same as those applied in the aforementioned Patent 2,244,374.

Referring now to Figures 1 and 2, we see the upper portion 1 of a vertical upright which carries on its lower portion an adjustable plateform support designed in accordance with the principles disclosed in the cited earlier patent. This vertical upright may be of many shapes, but for the present will be considered rectangular in cross section, possibly 4" x 4". A rigid sleeve, herein shown as a box-like structure 9, as previously described, is provided which fits the vertical upright 1 so that it may be slid up and down by means of a rope 5 passing through the pulley 2. The end of rope 5 is attached to the box-like structure 9 at 6. A certain looseness of fit is important for the operation of this invention, but of course, the box-like structure cannot be so loose on the vertical upright 1 that it can rotate about its axis.

Two coplanar rods 11 are attached to the box-like slideable structure 9 and project out horizontally to form a Y-shaped fork. The ends 50 of the rods 11 are bent downward at 51 to form hooks which can engage suitably spaced screw eyes 12 placed in the side wall 14. Thus far, the structure is the same as that described in my earlier patent, and for a full explanation of the utility of this arrangement, reference is again made thereto.

Returning now to the present drawing, it will be seen that a notch 52 in each of the hook ends 50 which is so positioned and shaped that it will engage the lower edge 54 of the bent plate 53 which is held in place by means of screw eye 12 which passes through the hole 55 provided for this purpose in the plate 53.

The operation of my invention will now be explained with specific reference to Figures 1 and 2. It will be clear that the slideable bracket 9 can be so positioned with the aid of the rope 5 so that hooks 50 will be in the position shown in Figure 2. To make certain that the notch 52 clears the lower edge 54 of the plate 53, the lower end of the vertical upright 1 may be pulled away from the building. This is also shown in Figure 2. The notch 52 may now be engaged with the plate 53 by lowering the slideable bracket 9 by means of the rope 5, and by placing the vertical upright 1 back in a plumb position. This may involve actually stressing and deforming the horizontal rods 11 as shown in Figure 1.

I have selected the dimension of the slideable bracket 9 relative to the cross section of the upright 1 so that when it has been pressed into engagement in this manner, it binds on the vertical upright 1 so that it can no longer be displaced upwardly thereon. It is clear then, that the hooks 50 are anchored in the screw eyes 12 proof against accidental disengagement.

The release of the hooks by a workman standing on the ground now proceeds as follows: Since the slideable bracket 9 can no longer be raised by means of the rope 5, it is necessary for the workman to lift the entire upright in order to disengage the notch 50 from the lower edge of plate 53. Lifting the vertical upright 1 as well as pulling its base away from the building 14 will return the hook 50 and plate 53 to the position of Figure 2 where further lifting of the upright will completely disengage the hooks 50 from the screw eyes 12. It is important to observe

that the release of the hooks requires the lifting of the vertical upright, and that this operation cannot be performed while workmen are on the scaffold.

It will now be clear to one familiar with the art, how my invention achieves its objectives. It will be apparent that there may be deviations from the invention as described which still fall fairly within the spirit and scope of the invention. It is understood, therefore, that my invention is not limited by the illustrated embodiment, but by the following claim.

I claim:

A scaffold for attachment to a building having an attached screw eye and a cooperating latch plate affixed to and extending obliquely away from said building directly beneath said eye, said scaffold comprising, a rigid upright, a sleeve slidably embracing said upright for longitudinal movement thereon, means associated with said upright for raising or lowering said sleeve, a rod-like member attached to said sleeve and extending outward therefrom in substantially perpendicular relationship with said upright, a downward projecting hook on the outer end of said rod-like member having a notch along the outermost edge thereof and adapted for cooperative engagement with said latch plate, said scaffold being arranged whereby when the base of said upright is displaced outward from normal operative position said hook may be freely lowered into engagement with said screw eye and freely raised for disengagement therefrom, and further arranged whereby when said hook is so lowered into engagement with said screw eye and said base of said upright is returned to normal operative position coaction of said notch and said latch plate preclude disengagement of said hook from said screw eye while simultaneously stressing and deforming said rod-like member, said deformation of said rod-like member being thereby effective to cause said sleeve to bind rigidly to said vertical upright.

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