

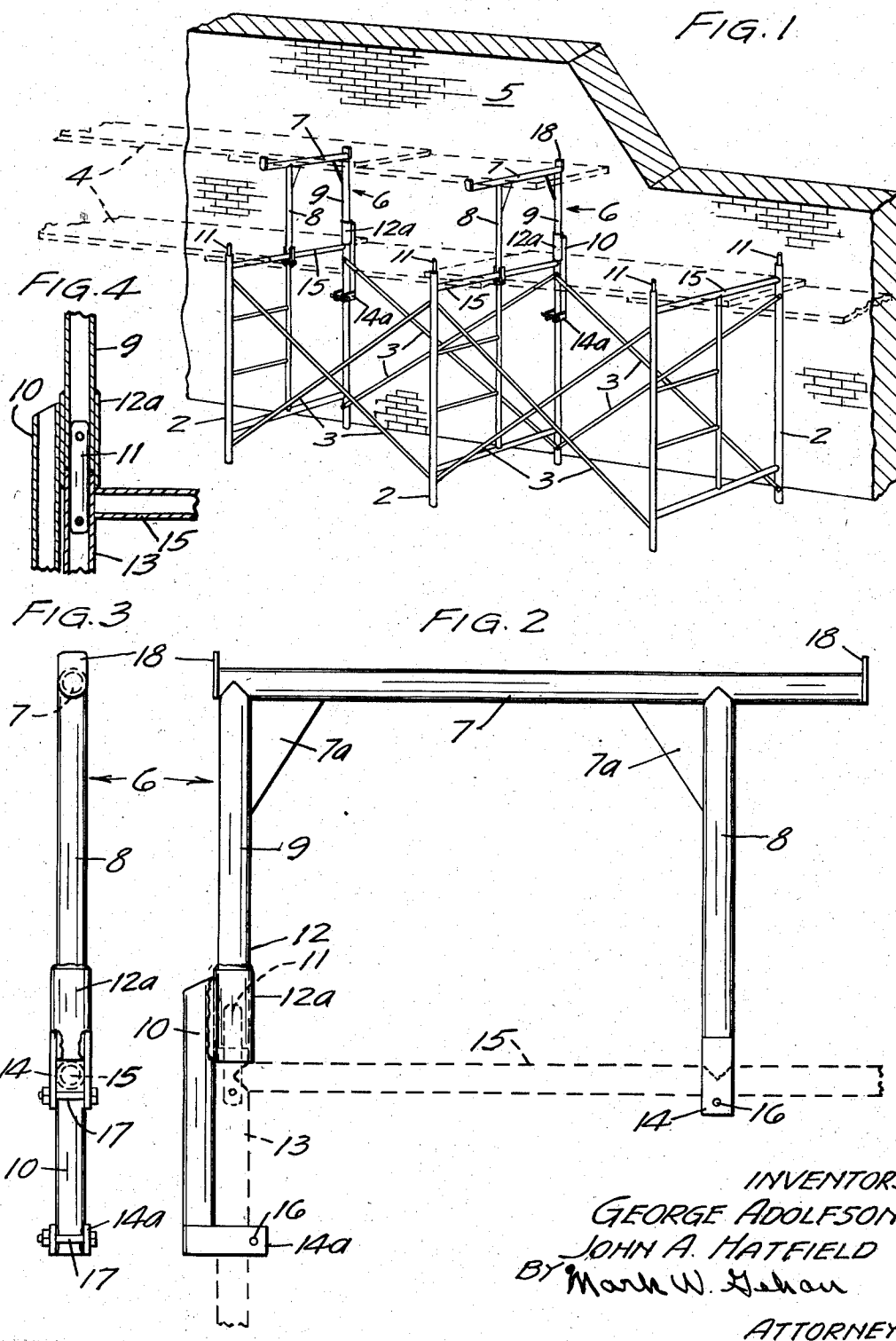
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SCAFFOLDING ACCESSORY

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SCAFFOLDING ACCESSORY

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This invention relates to construction methods and materials. More particularly, it relates to scaffolding, such as is normally employed in the construction of buildings and other structures. Our invention is intended for use with such scaffolding, and provides an accessory whereby labor time necessary for the erection of buildings (particularly brick buildings) may be substantially reduced.

Scaffolding, as used in modern day construction operations, is usually of the tubular-sectional type. Such scaffolding is obtainable in a variety of heights, widths, and configurations, and may be assembled into different forms to suit the particular job being worked upon.

In a relatively simple kind of scaffold assembly, a pair of five-foot end frames are set up in upright position, and then connected by one of several types of cross braces to provide a raised platform upon which bricklayers, or other workmen, may stand during the construction operation. When the work in progress reaches a height beyond which the workman cannot conveniently reach, another pair of end frames is set on top of the first pair, hereinabove referred to, and the workmen then move up to the second stage of the scaffold. Planking, of course, is laid between the two end frames, to provide the platform upon which the workmen stand.

A serious difficulty which has heretofore existed in connection with scaffolding operations as above described, arises because of the fact that the workmen, while they are on any one level of scaffolding, are, most of the time, either working too high, or working too low, for maximum efficiency. In other words, if the workmen are laying bricks, for example, while they are on any particular level, either they raise the bricks above the workmen's most efficient working level, or stoop to place them below the optimum working height.

Although some scaffolding manufacturers have attempted to remedy the difficulty above mentioned, by manufacturing end frames in relatively short heights, such end frames have not proved popular or gone into wide usage, because of the considerable amount of labor involved in continually raising the level of the scaffolding, a short distance, to provide more intermediate stages therein. As a matter of practice, it appears that the workmen and contractors would rather encounter "stooping" and "reaching," rather than stopping to raise the entire level of the scaffolding a short intermediate distance. Other means, such as ordinary carpenters' sawhorses, have been utilized to provide intermediate levels for workmen on scaffolds, but all of them, to the best of our knowledge, have proved either to be unsafe or so costly to erect as to prove impracticable.

The principal object of the present invention is to provide a simple accessory, for use with scaffolding, whereby workmen thereon can safely and simply raise themselves to an intermediate level, where they may work with greater efficiency and less fatigue. A further object of our invention is to provide such an accessory which, if desired, may be installed upon the scaffold

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without the use of nuts, bolts, or other means of affixation. By reason of this latter feature of our device, it is not necessary for workmen, or the contractor, to keep track of and locate a number of bolts, or such like, before the accessory can be put to use. Although, as above indicated, our device does not require the use of additional members for affixing it to the scaffold, we do, nevertheless, provide for the use of bolts, or such like, to meet the contingency that some special circumstance, or usage, should make their use desirable.

A particular advantage of our accessory is its simplicity. It may be very easily manufactured, on a production basis, from materials which are readily available in the scaffold manufacturing business. It has no moving parts and is extremely rugged and durable. It is relatively light in weight and may be very easily transported from one job to another and raised to the site of operation.

A further advantage of our accessory is that it may be used in connection with a wide variety of scaffolding. It needs no modifications to be used upon different brands of scaffolding, originating with different manufacturers. Our device is extremely safe to use, and will carry loads far in excess of any which normally would be placed upon it. It is very simple to mount, and workmen need no special instructions before commencing with the use of it. Other objects and advantages of the invention will be apparent from the following detailed description.

Referring now to the drawings:

Figure 1 is a schematic view of a typical scaffolding assembly, upon which a pair of our accessories have been mounted.

Figure 2 is a side elevational view of our accessory.

Figure 3 is an end view of our accessory.

Figure 4 is a detail view of the construction whereby the principal support member is locked upon the end frame.

The typical scaffolding assembly shown in Figure 1 comprises, first, a plurality of end frames 2 which are maintained erect, and in secure position, by cross brace members 3. The detailed manner in which members 2 and 3 are secured to each other forms no part of this invention, and those details are not shown. Reference character 4 designates planking, upon which the workmen stand. A fragment of a building 5 is shown at the rear of the scaffolding, in Figure 1. In this instance, the building is being erected of brick, as shown.

The accessory of our invention is designated generally by reference character 6. Although only a pair of our accessories are shown in Figure 1, it will, of course, be understood that a greater number of them could be employed, if the area being worked upon were large enough. For example, a third accessory 6 might be placed under the end of planking 4 projecting toward the left in Figure 1.

The accessory of this invention comprises four principal parts, as follows: Top platform member 7; prop leg 8; principal support member 9; and offset brace member 10. Each of these portions is, preferably, made from hollow, tubular metal stock. Gussets 7-A serve to reinforce the accessory and precludes weld breakage among the principal parts above referred to if the device should be dropped or otherwise handled abusively by careless workmen. Standard scaffolding end frames (such as are indicated by reference character 2 in Figure 1) are customarily made with an upwardly projecting coupling pin 11 at each of their upper corners. This coupling pin is designed to fit, sleeve-like, within the bottom ends of an end frame mounted next upwardly upon the end frames shown. We utilize these coupling pins and sleeves 12-A (which encircle the "stub" upper tips of the end portion 13) for the mounting of our device. Sleeve 12-A may be "tailor" made with varying inside diameters, so that

it will fit snugly over the stud ends of different size end frames, made by different manufacturers. Principal support member 9, as above indicated, is preferably made from hollow tubular stock. Its hollow bottom end 12 is of a size adapted to fit snugly over coupling pin 11 (see Figure 2) and then sleeve 12-A encircles the above-mentioned "stub." The weight of the principal support 9 (and, in fact, a portion of the weight of the whole accessory) is then carried by the top lip of the vertical member in the end frame 2, while the lower lip of sleeve 12-A rests upon the horizontal ledges, said sleeve serving to stabilize and lock the whole device. When our accessory is seated over pin 11, as shown in Figure 2, it is then secure against downward movement by reason of weight applied directly over principal support member 9. Top platform member 7 is affixed to the upper end of support member 9 and extends horizontally therefrom. This top platform member serves as a plank supporting means, as shown in Figure 1. Prop leg 8 is affixed to top platform member 7 toward the end portion thereof, which is remote from support member 9. Said prop leg 8 extends vertically downward from platform member 7 and is of sufficient length to maintain said member 7 on a horizontal plane, when support member 9 is seated upon pin 11. Offset brace member 10 is welded, or otherwise integrally attached, to the outwardly facing peripheral portion of the lower end of support member 9. Although this brace member, as shown, is affixed to the surface of support 9 which is closest to building 5, it could be moved 45° in either direction, about the circumference of said support, when it is critical to conserve space between the scaffold and building 5. Brace member 10 thus clears the upper end portion 13 of end frame 2. The lower end of prop leg 8, and the lower end of brace member 10, are each provided with a U-shaped saddle member 14 and 14-A. The arms of said saddle members 14 and 14-A are spaced apart from each other so as to fit snugly around horizontal strut 15 and upper end portion 13 of end frame 2. Brace member 10 serves a dual function: First, it prevents support member 9 from tilting forwardly toward building 5. Second, it precludes the accessory from swaying to the right, or to the left, when it is mounted in position. Prop leg 8 serves to support the rearwardly extending end portion of platform member 7. It also prevents the tip (the free tip) of said platform member from revolving about the axis of support member 9. The tips of saddle members 14 and 14-A are formed with opposed apertures 16, through which nut and bolt assemblies 17 may be threaded, if some particular usage should make that desirable. As hereinabove indicated, however, it is not usually necessary to employ such assemblies in order to maintain the accessory in secure, safe position upon the scaffolding. In most instances, the three-way "locking" effect obtained by saddles 14 and 14-A, and by the seating of support member 9 on pin 11, will be sufficient to hold the accessory secure from movement in any direction.

Accessory 6 is most conveniently mounted upon end frames 2 by holding the accessory so that platform member 7 extends in a direction parallel to building 5, while support member 9 is being fitted over pin 11. After member 9 has been thus fitted over pin 11, platform member 7 is turned to extend at right angles to building 5, and saddle 14 is then dropped over strut 15.

Each tip of platform member 7 is provided with an upwardly projecting flange 18 which serves to prevent plank 4 from sliding off said platform.

We prefer that our accessory be of such dimensions as to raise the working level two and one-half feet. This distance is just half the height of end frames which are most commonly used in scaffolding. We also find that platform 7, from the center of support 9 to the center of leg 8, can very conveniently be 30 inches long. However, these dimensions are not critical and may be changed to suit certain particular jobs, where a lesser or greater height or length is desired.

It will also, of course, be understood that the particular materials above described are merely preferred materials, and that other materials could be used with substantially equal benefits. Also, the particular arrangement and configuration of parts herein shown and described is intended only to be exemplary. We do not intend to limit ourselves, or to exclude modifications falling within the spirit and scope of the invention.

What we claim is:

1. An accessory for use with a scaffolding assembly, comprising a principal support member adapted for affixation in upright position upon an upright member of said scaffolding assembly, a top platform member integrally attached to the upper end portion of said principal support member at an approximate right angle thereto, a prop leg member integrally attached to the free end of said top platform member at an approximate right angle thereto, said prop leg member being adapted for upright affixation to a horizontal member of said scaffolding assembly, and a brace member offset from and attached to the lower end of said principal support member, said brace member extending beyond the lowermost end of said principal support member and being adapted for affixation to a lower portion of said upright member of said scaffolding assembly.

2. An accessory for use with a scaffolding assembly, comprising a principal support member formed with a hollow lower end, said hollow lower end being adapted to seat upon an upwardly projecting portion of an upright member of said scaffolding assembly, a top platform member integrally attached to the upper end portion of said principal support member at an approximate right angle thereto, a prop leg member integrally attached to the free end of said top platform member at an approximate right angle thereto, said prop leg member being adapted for upright affixation to a horizontal member of said scaffolding assembly, and a brace member offset from and attached to the lower end of said principal support member, said brace member extending beyond the lowermost end of said principal support member and being adapted for affixation to a lower portion of said upright member of said scaffolding assembly.

3. An accessory for use with a scaffolding assembly, comprising a principal support member adapted for affixation in upright position upon an upright member of said scaffolding assembly, a top platform member integrally attached to the upper end portion of said principal support member at an approximate right angle thereto, a prop leg member integrally attached to the free end of said top platform member, the lower end of said prop leg member being provided with a saddle-shaped retaining member adapted to ride upon a horizontal member of said scaffolding assembly, and a brace member offset from and attached to the lower end of said principal support member, said brace member extending beyond the lowermost end of said principal support member, the lower end portion of said brace member being provided with a saddle-shaped retaining member adapted to fit about the periphery of said upright member of said scaffolding assembly.

4. An accessory for use with a scaffolding assembly, comprising a principal support member formed with a hollow lower end, said hollow lower end being adapted to seat upon an upwardly projecting portion of an upright member of said scaffolding assembly, a top platform member integrally attached to the upper end portion of said principal support member at an approximate right angle thereto, a prop leg member integrally attached to the free end of said top platform member at an approximate right angle thereto, the lower end of said prop leg member being provided with a saddle-shaped retaining member adapted to ride upon a horizontal member of said scaffolding assembly, and a brace member offset from and attached to the lower end of said principal support member, said brace member extending beyond the lowermost

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end of said principal support member, said brace member being provided with a saddle-shaped retaining member adapted to fit about the periphery of a portion of said upright member of said scaffolding assembly.

5. An accessory for use with a scaffolding assembly to provide an intermediate height therein, said accessory being a three-sided frame comprising a principal support member formed with a hollow lower end, said principal support member being adapted to seat upon an upwardly projecting portion of an upright member of said scaffolding assembly, a top platform member integrally attached to the upper end portion of said principal support member at an approximate right angle thereto, a prop leg member integrally attached to the free end of said top platform member at an approximate right angle thereto, said prop leg member being provided, at its lower end, with a saddle-shaped retaining member adapted to ride upon a horizontal member of said scaffolding assembly, a brace member being offset from and attached to the lower end of said principal support member, said brace

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member extending beyond the lowermost end of said principal support member, the lower end of said brace member being provided with a saddle-shaped retaining member adapted to fit about the periphery of said upright member of said scaffolding assembly, said accessory being adapted for use in pairs, the top platform members of each of two spaced-apart accessories being adapted to support plank-like elements upon which workmen may stand.

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