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[54] **CONVERTIBLE SCAFFOLD**
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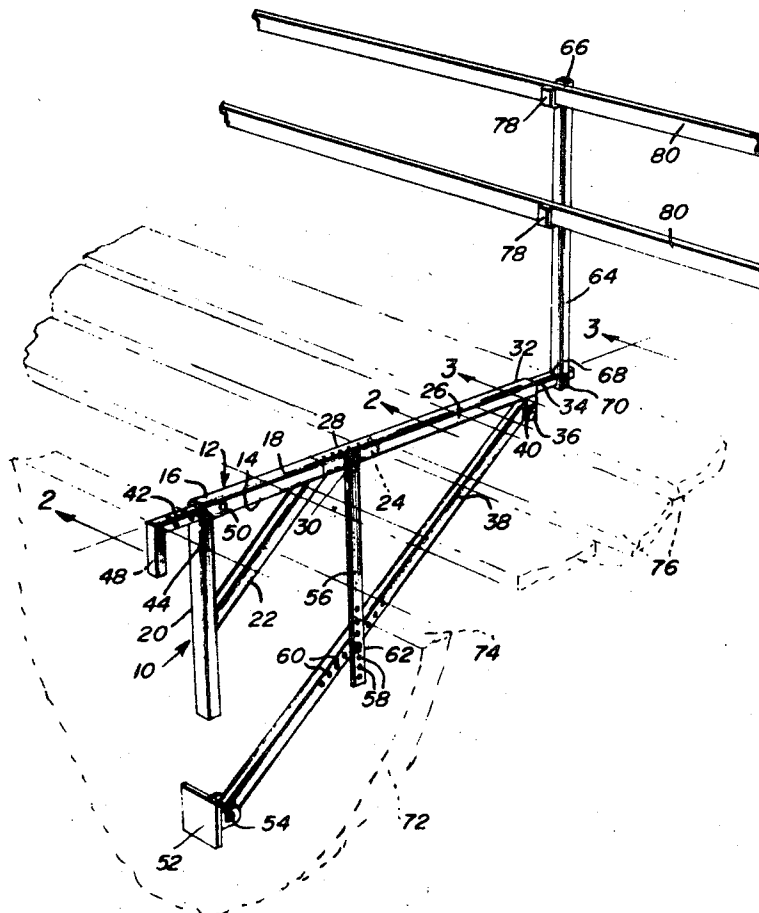
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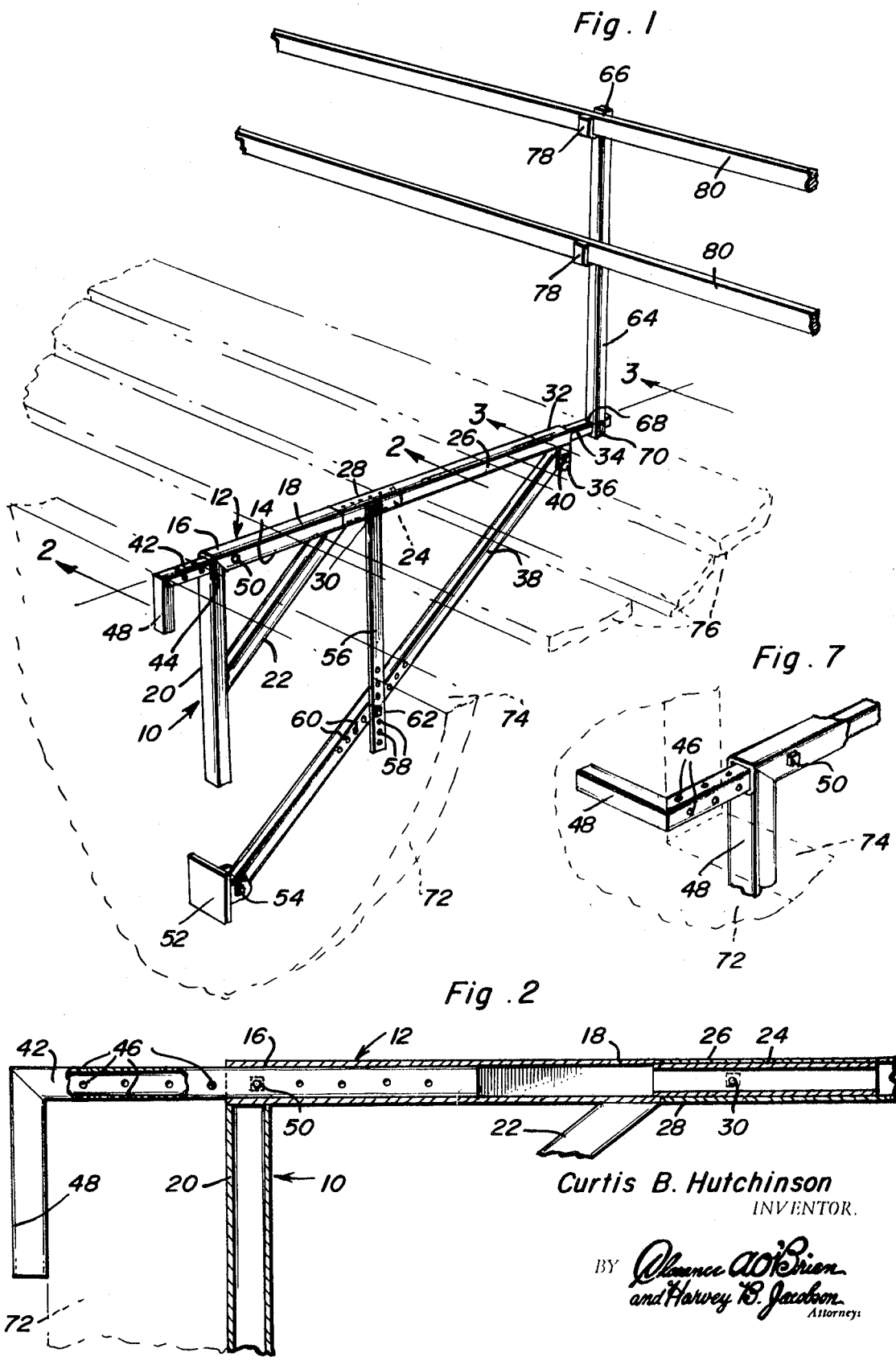
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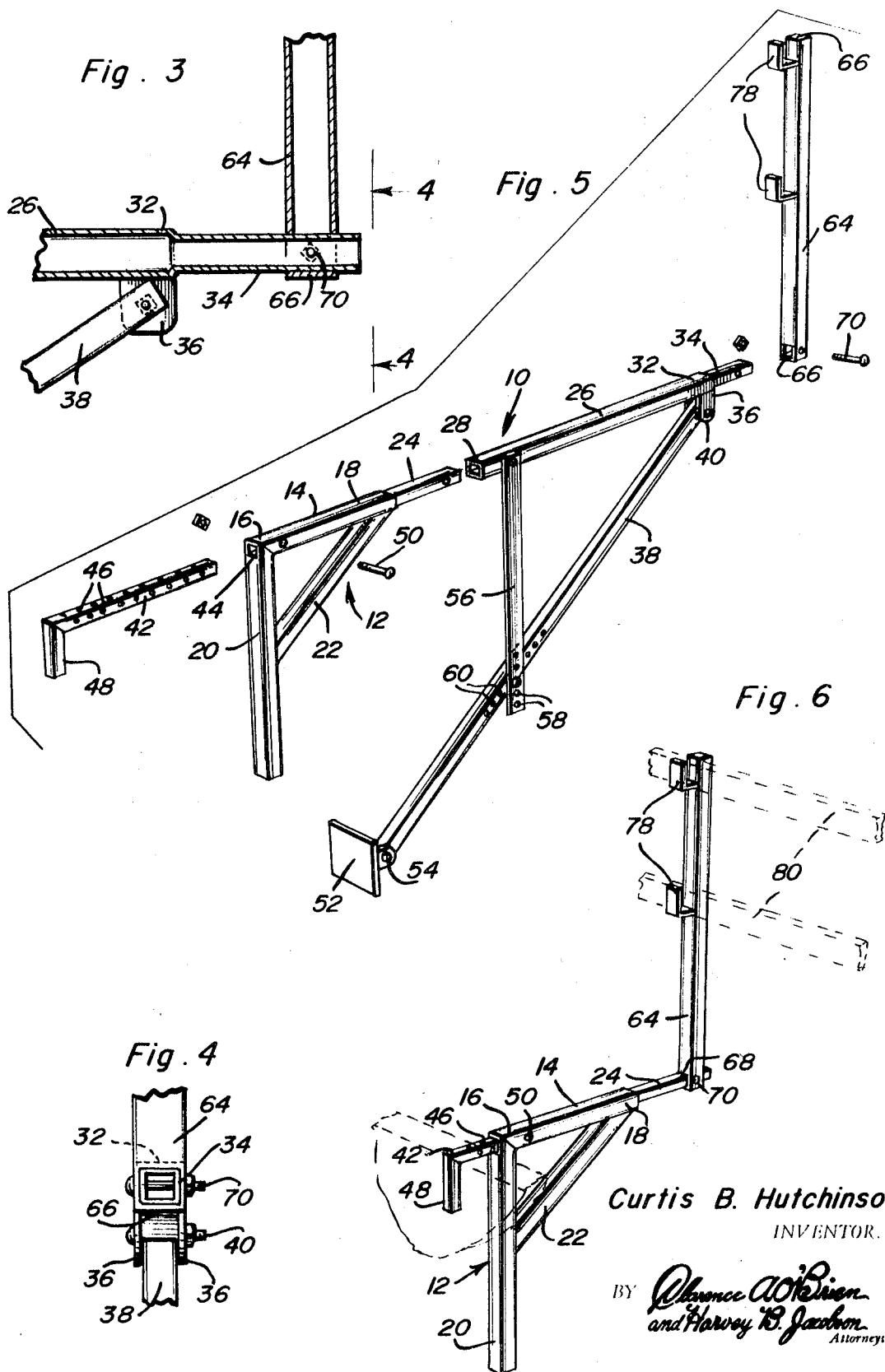
ABSTRACT: An inverted L-shaped wall-supported scaffold brace member including a first horizontal leg having inner and outer ends and projecting horizontally outwardly from a wall structure at its outer end. The second vertical leg of the brace member depends from the inner end of the first leg downwardly along the outer surface of the wall structure. The first leg defines a tubular receiver, square in cross-sectional shape, open at its inner end and an elongated tension arm which is also square in cross-sectional shape is slidably received in the receiver in selected angular positions rotated 90° apart about its longitudinal axis. The tension arm includes, on its end projecting outwardly of the inner end of the horizontal leg, a lateral abutment portion for engagement with the inner surface of the wall structure adjacent an opening in the wall structure through which the tension arm extends. Further, the tension arm and receiver include coacting structure whereby the tension arm may be secured in adjusted longitudinally shifted position relative to the receiver.





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CONVERTIBLE SCAFFOLD

The scaffold structure of the instant invention has been designed to provide a means whereby a scaffold may be conveniently supported at any window or other opening level on a wall structure, independent of partial support of the scaffold from the ground or the top of the wall structure. In addition, the scaffold structure is constructed in a manner whereby the scaffold platform supported therefrom may be of various widths and yet fully supported from the scaffold.

In addition to the scaffold structure being solely supported from the associated wall structure without partial support from the ground or from the top of an associated wall structure, the scaffold structure includes components which may be readily assembled in position on the exterior of a wall surface adjacent a window or other opening formed through the wall from within the building of which the wall comprises a part. Thus, the components of the scaffold may be readily carried to an elevated position within a building and erected on the exterior of the building without utilizing hoist assemblies disposed on the ground or supported from an upper elevated position on the building.

Many types of scaffolds are erected from the ground upwardly along the exterior surface of a building wall or lowered from the top of a building wall. These methods of positioning a scaffold on the exterior of a building wall intermediate the upper and lower extremities of the wall necessitates the expenditure of a considerable length of time. Accordingly, the main object of this invention is to provide a scaffold structure which may be erected at any window or other opening level on the exterior of a wall structure from the inside of the wall structure.

Another object of this invention, in accordance with the immediately preceding object, is to provide a scaffold structure including component parts enabling a scaffold platform of various widths to be supported from the scaffold structure.

A still further object of this invention is to provide a scaffold structure or assembly in accordance with the preceding objects and including structural components which may be readily disassembled for compact storage and handling when erecting the scaffold.

A final object of this invention to be specifically enumerated herein is to provide a scaffold structure which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble-free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a fragmentary perspective view of the scaffold with portions of a supporting adjacent wall and the scaffold platform illustrated in phantom lines;

FIG. 2 is a fragmentary enlarged vertical sectional view taken substantially upon the plane indicated by the section line 2-2 of FIG. 1;

FIG. 3 is a fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 3-3 of FIG. 1;

FIG. 4 is a fragmentary elevational view taken substantially upon the plane indicated by the section line 4-4 of FIG. 3;

FIG. 5 is an exploded perspective view of the scaffold structure; and

FIG. 6 is a perspective view of a modified form of scaffold structure adapted to support a narrower scaffold platform; and

FIG. 7 is a fragmentary perspective view of the scaffold structure illustrating the manner in which the anchor portion of the structure may be rotated 90° to engage the portion of a

wall structure defining one side of an opening formed through that wall structure.

Referring now more specifically to the drawings, the numeral 10 generally designates the convertible scaffold of the instant invention. The scaffold 10 includes a scaffold brace member referred to in general by the reference numeral 12 consisting of a first horizontal arm or reach 14 including inner and outer ends 16 and 18, respectively. The brace member 12 also includes a second upstanding reach or arm 20 which depends downwardly from the inner end of the arm 14 and a diagonal brace 22 is secured between the outer end 18 of the arm 14 and the arm 20 generally centrally intermediate its opposite ends.

The arms 18 and 20 are tubular in construction and formed of square tubing which has an inside dimension of 1½ inches.

The outer end 18 of the arm 14 includes an integral reduced terminal end 24 which is square in cross-sectional shape and has an outside dimension of 1½ inches. A tubular extension 26 is also provided and has its inner end 28 telescoped over the terminal end 24 and secured thereon by means of a suitable fastener 30. In addition, the outer end 32 of the extension 26 also includes a reduced terminal end 34 which is square in cross-sectional shape and has an outside dimension of 1½ inches. Of course, the inside dimension of the inner end 28 is 1½ inches and it may be seen from FIG. 1 of the drawings that the outer end 32 of the extension 26 includes a pair of opposite side depending mounting ears 36 between which the upper outer end of a downwardly and inwardly inclined brace 38 is secured by means of a fastener 40.

A rigid arm member 42 is provided and is square in cross-sectional shape and has an outside dimension of 1½ inches. The mitered upper end of the arm 20 has its inner wall cut away as at 44 to define a square opening having an inside dimension of 1½ inches and which is aligned with the inner end of the arm 14. The arm member 42 has its outer end snugly telescopically received within the inner end 16 of the arm 14 and through the opening 44. The arm member 44 has pairs of aligned transverse bores 46 formed through its opposing sides and the end of the arm member 42 which projects outwardly of the opening 44 includes a laterally directed abutment 48. In addition, a fastener 50 is provided and removably secured through the inner end 16 of the arm 14 and also through a corresponding pair of the bores 46 in order to secure the arm member 42 is adjusted longitudinally shifted position relative to the arm 14.

The inner lower end of the brace 38 has an abutment pad or foot 52 pivotally secured thereto by means of a suitable pivot fastener 54 and an upstanding brace 56 is provided and has its upper end secured to the inner end 28 of the extension 26 and the terminal end portion 24 of the arm 14 by means of the fastener 30 while its lower end has a plurality of longitudinally spaced apertures 58 formed therein. A selected aperture 58 is registered with a corresponding pair of aligned apertures or bores 60 spaced longitudinally of the brace 38 and a fastener 62 is utilized to secure the lower end of the brace 56 to the brace 38 centrally intermediate the opposite ends thereof.

A tubular railing support or post 64 is disposed in upstanding position adjacent the outer end 32 of the extension 26 and it will be noted that the post 64 is of square tubular construction and that closure plates 66 may be secured over the upper and lower ends of the post 64. However, the inner and outer walls of the post 64 have aligned square openings 68 formed therethrough which are 1½ inches in width and the 1½ inches terminal end 34 of the extension 26 is secured through the openings 68 by means of a suitable fastener 70 secured through the lower end of the post 64 and the terminal end 34.

The scaffold 10 may be readily erected upon a wall such as wall 72 having an opening 74 formed therein by first placing a pair of the scaffold brace members on the outside of the wall 72 from inside the latter through the opening 74 with the inner end of the arm member 42 extended inwardly from the inner end of the arm 14 a distance equal to the thickness of the wall 72. The brace members 12 are engaged with the wall 72 by

placing the brace members 12 with the portions of the wall 72 defining the lower marginal edge portion of the opening 74 between the arms 20 and abutments 48 with the feet 52 of the braces 38 abutting the outer surface of the wall 72. Of course, the arm members 42 may be adjustably extended as desired in order that the wall 72 will be snugly received between the arms 20 and the opposing abutments 48 and after two or more of the brace members 12 have been supported from the wall 72, a plurality of platform-defining planks 76 may be laid across the arms 14 and extension 16. Thereafter, workmen may stand upon the planks 76 and erect the posts 64 which are provided with brackets 78 at points spaced vertically therealong from which railing-defining boards 80 may be supported.

With attention now invited more specifically to FIG. 7 of the drawings it may be seen that the fasteners 50 may be removed and that the arm members 42 may be rotated in 90° increments about their longitudinal axes and reinserted through the openings 44 and within the arms 14 and again secured in position so as to engage the abutments 48 with the portions of the wall 72 defining the side marginal edge portions of the opening 46.

Finally, with attention now invited more specifically to FIG. 6 of the drawings, it may be seen that the extensions 26, the braces 38 and the braces 56 may be omitted and that the lower ends of the posts 64 may be secured on the reduced terminal ends 24 if a scaffolding platform of greater width is not required.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What I claim as new is as follows:

1. A scaffold brace member including a first tubular horizontal reach with inner and outer ends and a second upstanding reach depending downwardly from the inner end of said first reach, a rigid arm member, said arm member being removably telescoped into the inner end of said tubular reach, said first reach and arm member being of complementary inside and outside cross-sectional shapes, respectively, whereby said arm member may be telescoped into said disposed generally 90° relative to each other and keyed therein against rotation about its longitudinal axis relative to said first reach, said arm member including a first end projecting outwardly beyond said inner end of said first reach and including a fixed laterally projecting abutment adapted to engage the side of a wall against which said second reach is abutted and through which said arm member extends, said arm member and first reach including coacting means operable to releasably retain said arm member in selected predetermined longitudinally shifted positions in either of the four relatively rotated positions thereof.

2. The combination of claim 1 wherein said outer end of said first reach includes an upstanding railing support

member, said railing support member including an opening formed horizontally therethrough adjacent its lower end, said outer end of said first reach being snugly received through said opening.

3. A scaffold brace member including a first horizontal reach with inner and outer ends and a second upstanding reach depending downwardly from the inner end of said first reach, a rigid arm member, said arm member and said brace member including coacting portions supporting said arm member from said brace member in position generally paralleling said first reach and for adjustable longitudinal shifting relative to said first reach, said arm member including a first end projecting outwardly beyond said inner end of said first reach and including a laterally projecting abutment adapted to engage the side of a wall against which said second reach is abutted and through which said arm member extends, the outer end portion of said first reach including an elongated extension member removably mounted thereon, an inwardly and downwardly inclined brace member having its outer end pivotally secured to the outer end portion of said reach, the inner end of said brace member being adapted to abut against said side of said wall, and an upstanding brace member extending and secured between portions of said brace member and said first reach spaced generally centrally intermediate their opposite ends.

4. The combination of claim 3 wherein said coacting portions include a longitudinal guideway defined by said first reach in which said arm member is slidably received.

5. The combination of claim 3 wherein said guideway is defined by a hollow tubular portion of said first reach.

6. The combination of claim 5 wherein said first reach is generally square in inside cross-sectional shape, said arm member being generally square in outside cross-sectional shape.

7. A scaffold brace member including a first horizontal reach with inner and outer ends and a second upstanding reach depending downwardly from the inner end of said first reach, a rigid arm member, said arm member and said brace member including coacting portions supporting said arm member from said brace member in position generally paralleling said first reach and for adjustable longitudinal shifting relative to said first reach, said arm member including a first end projecting outwardly beyond said inner end of said first reach and including a laterally projecting abutment adapted to engage the side of a wall against which said second reach is abutted and through which said arm member extends, said outer end of said first reach including an upstanding railing support member, said railing support member including an opening formed horizontally therethrough adjacent its lower end, said outer end of said first reach being snugly received through said opening, said lower end of said railing support member being tubular and rectangular in cross-sectional shape, said opening being defined by a pair of aligned openings formed through one pair of opposing sidewall portions of said support member extending fully between the other pair of opposing sidewall portions of said railing support member.