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PLANK SUPPORT BRACKET

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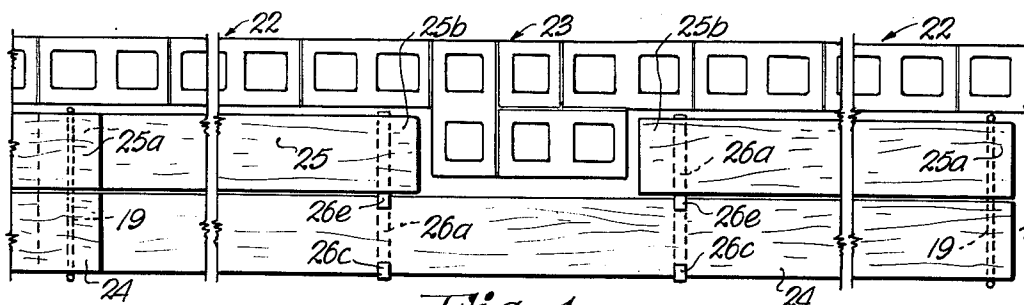


Fig. 1.

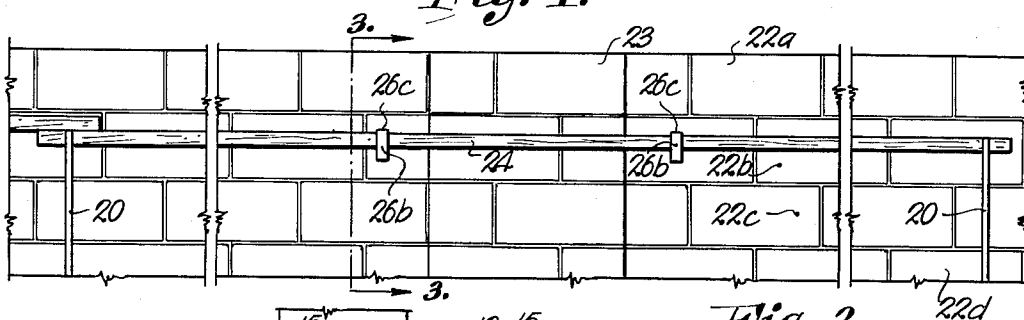


Fig. 2.

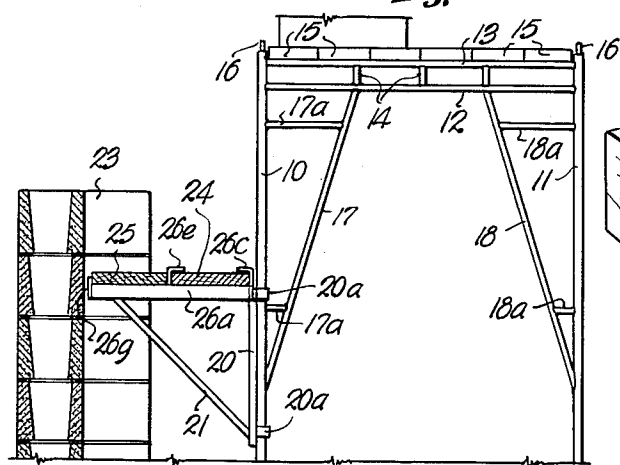


Fig. 3.

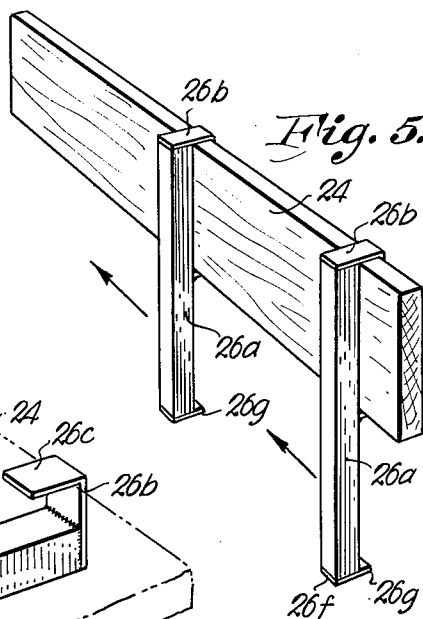


Fig. 5.

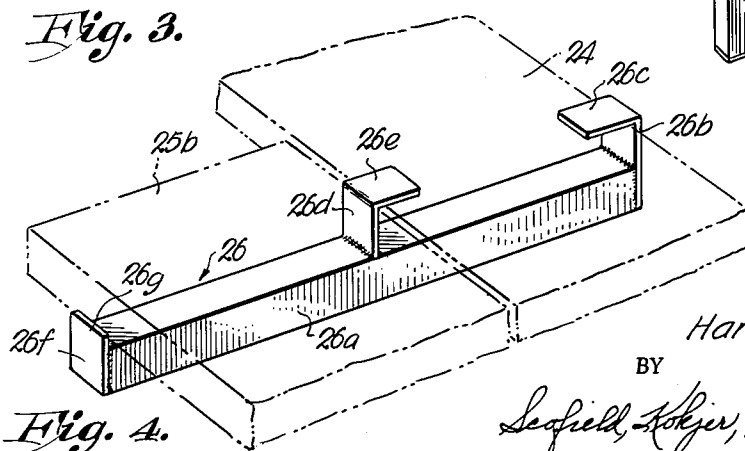


Fig. 4.

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1

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PLANK SUPPORT BRACKET
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This invention relates to plank support brackets particularly adapted to be used in conjunction with construction scaffolding and the planking supported thereby and refers more particularly to such a plank support bracket which may be employed with scaffolding and planking which are in use at and around pilasters.

In the construction of brick and masonry walls, the masons or bricklayers typically stand on planking supported by various types of conventional scaffolding. Likewise, the supplies of bricks or masonry blocks being used to make up the wall are also supported on such scaffolding at a different level thereby making it possible for the bricklayer or mason to have access to additional construction materials with a minimum of motion and effort. As the wall rises, the various scaffolding members carrying the aforesaid planking may be adjusted upwardly. Construction scaffolding may be positioned either on the inside or outside of the building or wall being constructed but, in any case, often must be arranged to fit around or thread around pilasters, columns or other projections or structures. Pilasters are columns or enlargements aiding in support of the wall or roof and may be positioned inside or outside, or both.

Previously, in order that the mason or bricklayer could stand in closely next to the pilaster zone, the free, unsupported ends of relatively shorter boards next to and in near abutment to the pilaster sides were secured by nailing to overlying boards at right angles thereto, the latter in turn nailed at their inner ends to elongate inner boards inside of the pilaster and extending the full distance between support brackets of the scaffolding. This latter method of support of the shorter boards next to or in near abutment to the pilaster has been relatively undependable in support, time consuming in application, and has resulted in the continual presence of the overlying short connecting boards which are a hazard to the bricklayer or mason tripping and falling and the like. It is thus eminently desirable to do away with the said older method of supporting the shorter outer planks on the scaffolding which enclose the pilaster for numerous safety reasons, for construction economy reasons involving time and effort in application and also for the purpose of minimizing the additional scaffolding, supports and brackets which might be necessary to be employed around such a pilaster.

An object of the invention is to provide a novel plank support bracket which is adapted to support the end of one plank from the length of another.

Another object of the invention is to provide a plank support bracket which is usable on conventional scaffolding whereby to fully and adequately solve, with complete safety, all the problems of mounting or positioning mason and bricklaying supporting planking around a wall or roof supporting pilaster.

Another object of the invention is to provide a plank support bracket which permits the planking associated therewith to be moved upwardly with the scaffolding supporting same without change in application of the bracket.

Another object of the invention is to provide an extremely strong, simply applied, completely safe plank support bracket which solves all of the major problems involved in the support of different lengths of planking on construction scaffolding.

2

Another object of the invention is to provide a plank support bracket which supports a relatively shorter plank from a relatively longer plank from underneath both of same whereby to minimize any hazards with respect to the walking, standing or working of a mason or bricklayer on the upper side of said planks over said bracket.

Another object of the invention is to provide a simple, rugged, easily applied, very strong plank support bracket having a long life under constant and heavy wear, same adapted to solve major problems in the support of masonry and bricklaying planking on conventional scaffolding.

Another object of the invention is to provide a plank support bracket which is readily and easily applied on planking supported by conventional scaffolding, which brackets may be retained in place indefinitely or easily removed with a minimum of effort and which may be easily inspected at any time in place to ascertain their presence and proper alignment and position.

Another object of the invention is to provide a plank support bracket which takes up a minimum of use and storage space, which may be easily manufactured, which is extremely simple in construction and which may be handled, applied and removed with respect to planking and scaffolding without fear of injury to itself, the planking or scaffolding.

Another object of the invention is to provide a plank support bracket which greatly improves the safety, appearance, reliability and usefulness of conventional scaffolding and planking with respect to construction involving pilasters and other protrusions or projections on walls being constructed.

Other and further objects of the invention will appear in the course of the following description thereof.

In the drawings, which form a part of the instant specification and are to be read in conjunction therewith, an embodiment of the invention is shown and, in the various views, like numerals are employed to indicate like parts.

FIG. 1 is a top plan view of a masonry wall construction with portions of masonry scaffolding and planking shown positioned with respect to same, portions of the scaffolding structure shown supporting the outer end of the planking and a pair of the subject plank support brackets being shown separately in their mode of application to support the inner ends of shorter planks with respect to a pilaster.

FIG. 2 is a view taken from the lower side of FIG. 1 looking upwardly in the view at the level of the mason's walk, looking at the outer side of the planking.

FIG. 3 is a view taken along the line 3—3 of FIG. 2 in the direction of the arrows but including scaffolding to which the planking is attached.

FIG. 4 is a three-quarter perspective view taken from above showing the subject plank support bracket in full lines engaging one longer plank and supporting one end of another shorter plank by virtue of such engagement, the planking shown in dotted lines.

FIG. 5 is a perspective view from below of a pair of the plank support brackets shown engaged in sliding fashion with one plank whereby to be adapted thereafter to receive on the upper sides of the portion thereof extending away from said engaged plank portions of other shorter planks.

Referring first to FIG. 3, therein may be seen in side view a portion of a conventional stationary scaffolding system. Vertical forward members 10 and rearward members 11 have connected to the upper ends thereof horizontal members 12 and 13. The latter are connected and braced to one another by short vertical members 14 whereby to support a plurality of elongate parallel planks 15. Vertical extensions 16 operative to receive conven-

tional guard rails, are not seen or detailed. Internal bracing members 17 and 18 connect at their lower ends to verticals 10 and 11, respectively, and at their upper ends to horizontals 12. Additional horizontal braces 17a and 18a may be employed. Extending outwardly from frontal verticals 10 are horizontal supports 19 (FIG. 1) of side wall brackets adapted to support another level of planking. The side wall brackets also include vertical legs 20 connected to frontal verticals 10 by loop engagements 20a or the like. Outwardly angled braces 21 communicate from the lower ends of vertical legs 20 to the outward ends of horizontal supports 19. Planks 24 and 25 are received on the side wall brackets in a manner to be described in greater detail.

All of the above-described scaffolding is entirely well-known and conventional and comprises no integral part of the instant invention, but, rather, the environment in which same is used and practiced.

Reference is now made to FIG. 1 which shows, in plan view from above, a masonry wall generally designated 22 and made up of a series of levels or layers of masonry blocks laid in courses with respect to one another in conventional manner. In FIG. 2 the various levels or layers may be seen clearly and are generally designated 22a, 22b, 22c and 22d. A pilaster is seen in the central zone of the wall and is generally indicated 23, that is, there is an internal (or, alternatively, external) thickening of the wall in vertical section for reinforcement thereof, support of the roof, or other conventional purpose. Such a pilaster might comprise an internal or external vertical column, one or more beams, a thickened wall portion as seen here, etc., depending upon the type of wall construction. The main point involved is that the mason's or bricklayer's plank footing or platform must be laid therearound in order to permit work sufficiently close thereto.

Referring to FIGS. 1 and 3, it can be seen that the platform footing or planking for the mason or bricklayer is received at the ends thereof on top of horizontal supports 19. Such footings comprise elongate continuous planks 24 and, in the vicinity of and on each side of the pilaster, shorter planks 25. While the outer ends 25a of these shorter length planks are received on horizontal supports 19 of the scaffolding, provision must be made to support the inner ends 25b thereof next to the pilaster. Conventionally this has been accomplished by nailing short boards at right angles to the axes of planks 24 and 25 on top of said planks 24 and 25. However, I propose to use my plank support bracket best seen in detail in FIG. 4. When several sets of scaffolding are used next to one another as at the left in FIG. 1, the ends of the planks may overlap.

Referring, then, to FIG. 4, the bracket is generally designated 26. Body portion 26a is preferably hollow and rectangular or square in axial section and of sufficient length that same underlies fully each of planks 24 and 25 when transverse thereto. At one end thereof, there is an elongate vertical flange 26b which seals with the lower end thereof one end of body member 26a and has a plank overlying upper portion 26c connected to the upper end thereof. The latter (26c) extends horizontally and is spaced upwardly from the upper surface of body member 26a a distance only slightly greater than the thickness of plank 24 or plank 25. The type of planks used for planks 24 and 25 are typically and preferably 2 x 10's, and the bracket measurements described adapt thereto.

Intermediate the length of body member 26a is a second vertical flange member 26d welded or otherwise fixedly attached to the upper surface of body member 26a. Member 26d has a horizontally extending upper portion 26e facing in opposition to flange 26c at the same level above the upper surface of body member 26a as the latter. The distance between opposed faces of vertical members 26b and 26d is only very slightly greater than the width of planks 24 or 25. A vertical flange

26f closes the opposite end of body member 26a in the manner analogous to the closure at 26b and has a portion 26g thereof extending upwardly from the body member 26a upper surface whereby to provide a stop for the edge of plank 25. The distance between opposed faces of flange 26g and flange 26d is preferably the same as the distance between opposed faces of flange 26d and flange 26b.

FIG. 5 shows the manner in which brackets 26 may be mounted on a plank 24, namely, by engaging flanges 26b, 26c, 26d and 26e with one free end of the plank and sliding same along until they are spaced at intervals along plank 24 as seen in FIG. 1 whereby to be able to underlie the inner ends of planks 25, as at 25b and thus give full, safe support to such ends. The brackets may be removed in the same manner, namely, by removing planks 25 therefrom, then lifting planks 24 from supports 19 and then sliding members 26 therefrom.

It should clearly be understood that it is not necessary that the scaffolding system shown be employed or, indeed, that any given system of planking be employed. Whenever one plank or set of planks is to be supported by another plank, the instant bracket may be employed. All that is required is that there be one plank which the flanges can engage in sliding overlying fashion of the manner shown, with the body of the bracket underlying both the plank engaged by said flanges and the plank to be supported by the free part of the bracket body.

A typical and operative set of actual dimensions or measurements for the subject bracket, when used with 2 x 10 planks at both the plank 24 and plank 25 positions, would be as follows: It is understood that a so-called 2 x 10 plank actually has a thickness of some 1½ inches, that is, the plank is milled to such thickness, while the width of the plank is actually substantially 9½ inches. With these typical measurements in mind, then, the distance between opposed faces of stop 26g and flange 26d would be ten inches. The distance between opposed faces of flange 26d and flange 26b would be ten inches. The distance between the upper surface of body 26a and the undersides of flanges 26c and 26e thereabove would be 1¾ inches. The length of flanges 26e from their juncture with flanges 26b and 26d would be two inches. The height of flange 26g above the upper surface of member 26a would be ½ to ¾ of an inch or greater. Assuming body 26a to be hollow, tubular and substantially square in transverse section, the side height and top and bottom width thereof would be, typically, two inches. The thickness of flanges 26b, 26d, 26f and 26g would be, typically, ¼ inch. All construction of the bracket would be of steel of sufficient thickness to carry the contemplated loads with adequate or ample safety margin and with connections comprising conventional welds.

It should be understood that construction materials (bricks, masonry blocks, etc.) are carried and collected on the scaffolding at the level defined by planks 15. The level at which the subject bracket is employed, namely, the level of planks 24 and 25, is solely employed as the walking area of the mason or bricklayer and is not a zone of construction material support, storage or collection. If the contrary were true, then the planking and bracket might exceed the loads for which they are designed. The bracket has been tested in specific models of application of dimension as described at loads of 800 pounds and in excess thereof. The average weight of a worker and any masonry load he would transfer from the level of planks 15 to the wall would be far less than this. Thus, the bracket can easily handle a 220-pound bricklayer and his workloads with considerable margin and factors of safety.

There is no change in the usual and conventional manner of use and adjustment of the scaffolding as the wall to be constructed rises. Thus, for example, after the wall height reaches typically, four feet above ground or floor

level, the scaffolding and planking is set up, either internally or externally of the wall (typically depending upon whether the floor slab has been poured) as seen in the figures. Planks 15 are positioned at a height of approximately six feet six inches to six feet eight inches, while planks 24 and 25 are at a level of some three feet four inches. The wall is then constructed by the mason or bricklayer standing on planks 24 and 25 and drawing construction materials from the level of planks 15 to a height of approximately eight feet. At this wall height level, planks 25 are raised onto the platform of planks 15, followed by planks 24 with brackets 26 still attached thereto. Connections 20a are released and the side wall brackets or outriggers are raised upwardly on verticals 10 to where members 19 are at the same level as horizontals 13. Connections 20a are then reclamped and planks 24 and 25 are replaced on members 19, planks 24 first. After the wall rises to a height of twelve feet, jacks are added to verticals 10 and 11 and thereafter planks 15 are raised to a new height level. The outriggers are also then unplanked, lifted another height increment and then replanked as previously described. This sequence continues until the full wall height is reached. With conventional scaffolding employing added jacks, a twenty-four-foot wall might very well be constructed.

The instant bracket saves the time of bricklayers at each instance of work involving a shift in the scaffolding. Conventionally in the trade, hod carriers originally set up and thereafter periodically raise the scaffolding, while the masons and bricklayers stand by idle unless there is another place or zone of construction immediately available. Thus, the masons and bricklayers will be idle at the initial installation of the scaffolding when, conventionally, planks 25 must be nailed to planks 24 and then, at every raising of the outriggers or side brackets on the scaffolding and addition of jacks, they are again idle. Conventionally, the initial connection of planks 24 and 25 would have to be disconnected and then renailed as the outriggers are unplanked and then replanked. This time consuming operation is completely removed at every scaffolding change with the instant bracket improvement. The brackets on the planks 24 are raised therewith just like another plank without removal therefrom.

Another alternative conventional way of working around columns and pilasters is to provide a scaffolding jack closely on each side thereof with the scaffolding planking ending closely adjacent the column or pilaster on each side thereof with bridging short planks inside or outside of the column or pilaster. This alternative jack or scaffolding arrangement usually requires one or more additional jacks in the scaffolding array, the rental cost thereof and the time required to set up and raise the parts of the latter requirements are eliminated entirely by my invention.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects herein set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and sub-combinations are of utility and may be employed without

reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A plank support bracket comprising an elongate body member sufficiently rigid to resist deflection when supporting a board at its free end and of sufficient length to underlie at least the combined widths of a first and a second plank, two L-shaped flange means one connected to one end of said body member and the other intermediate the length thereof, said two flange means, adapted to engage therebetween the side edges of and overlie with a portion of each of same portion of one side of a first plank, and a vertical flange stop on the free end of said body member adapted to engage between same and the intermediate flange the side edges of a second plank.

2. A plank support bracket comprising an elongate body member having a flat upper side, said body member of sufficient over-all length to completely underlie the combined widths of a first and a second plank, a first flange means connected to one end of said body member, extending upwardly from the upper side thereof a distance at least equal to the thickness of a first plank and having an upper extremity thereof overlying the upper side of the body member and adapted to engage one side of a first plank, a second flange means connected to said body member upper side intermediate the ends thereof, extending upwardly therefrom a like distance to said first flange and having an upper extremity thereof overlying the body member upper surface in opposition to the first flange upper extremity and also adapted to engage a side of a first plank, the first and second flanges spaced apart a distance no less than the width of a first plank, and stop means connected to the other end of said body member and extending upwardly from the upper side thereof and spaced from said second flange means a distance no less than the width of a second plank.

3. A bracket as in claim 2 wherein said body member is hollow and substantially rectangular in transverse cross section, said first flange operating to seal one end thereof and the stop means operating to seal the other end thereof.

References Cited by the Examiner

UNITED STATES PATENTS

50	1,462,086	7/1923	Echlin	182—121
	1,735,003	11/1929	Heidel	182—122
	1,886,921	11/1932	Tobin	182—117
	2,015,378	9/1935	Davis	248—210
	2,308,180	1/1943	Larsen et al.	248—238
55	2,706,662	4/1955	Brown	182—223
	2,719,691	10/1955	Vance	248—208
	2,775,490	12/1956	Hofrichter et al.	182—223

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