

May 14, 1929.

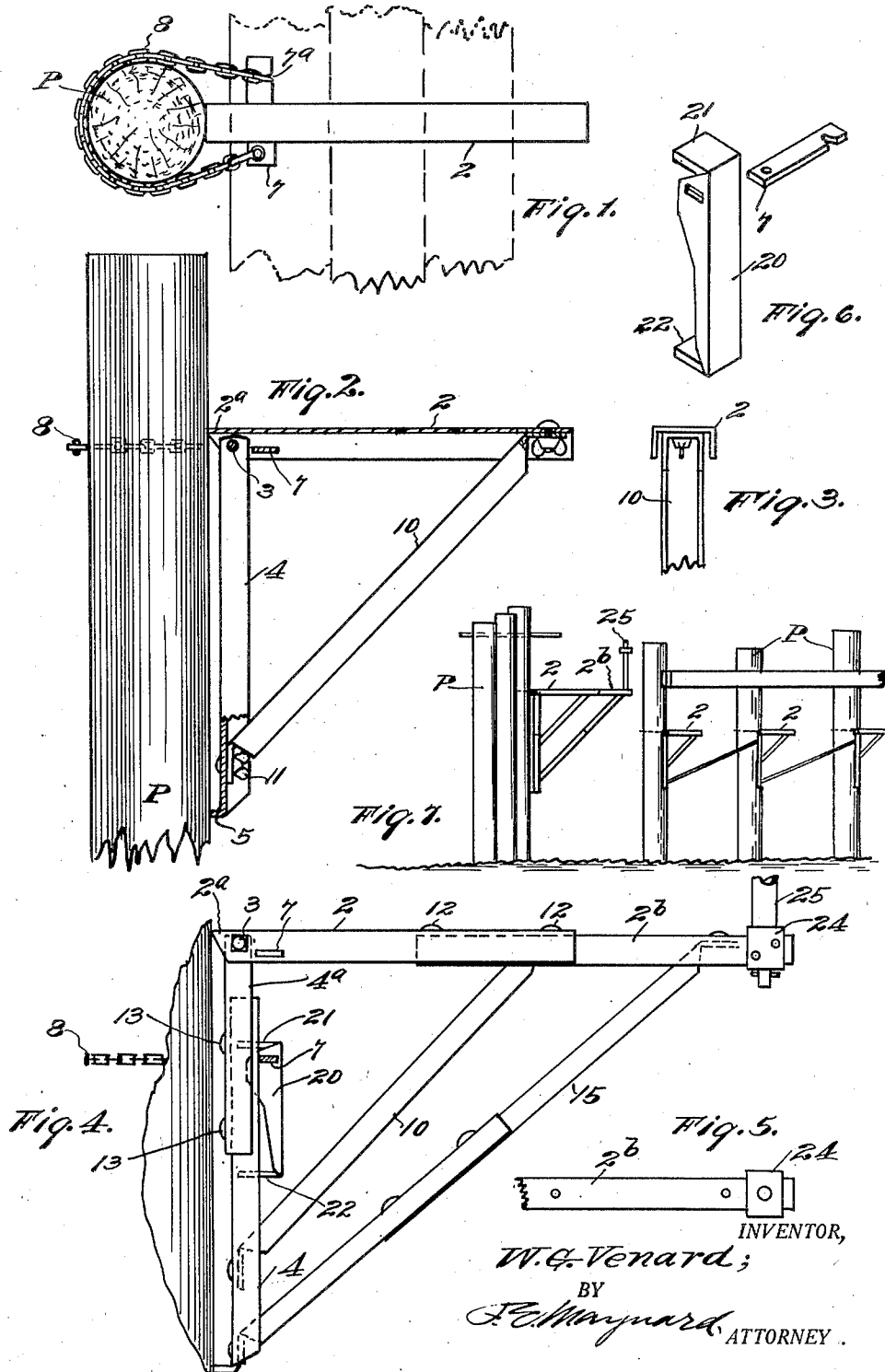
W. G. VENARD

1,712,974

SCAFFOLD BRACKET

Filed Sept. 6, 1927

2 Sheets-Sheet 1



May 14, 1929.

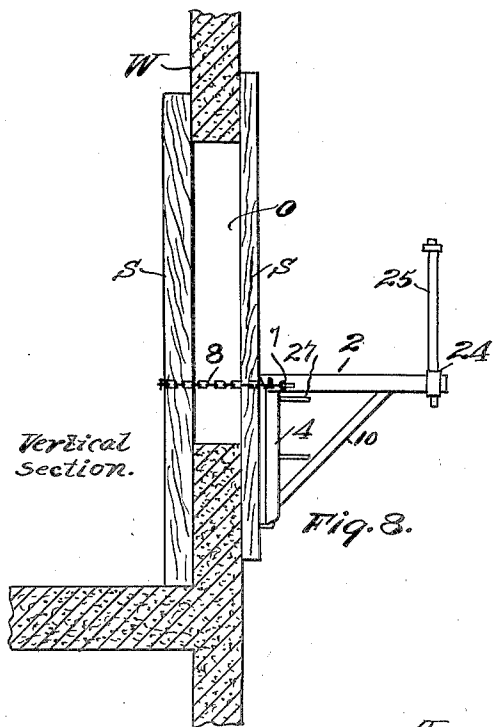
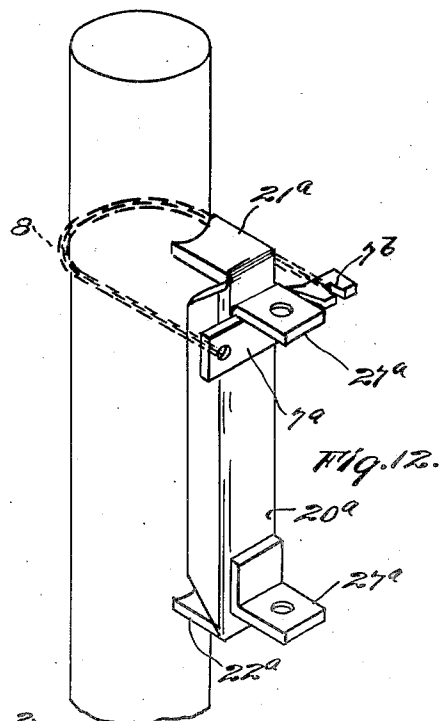
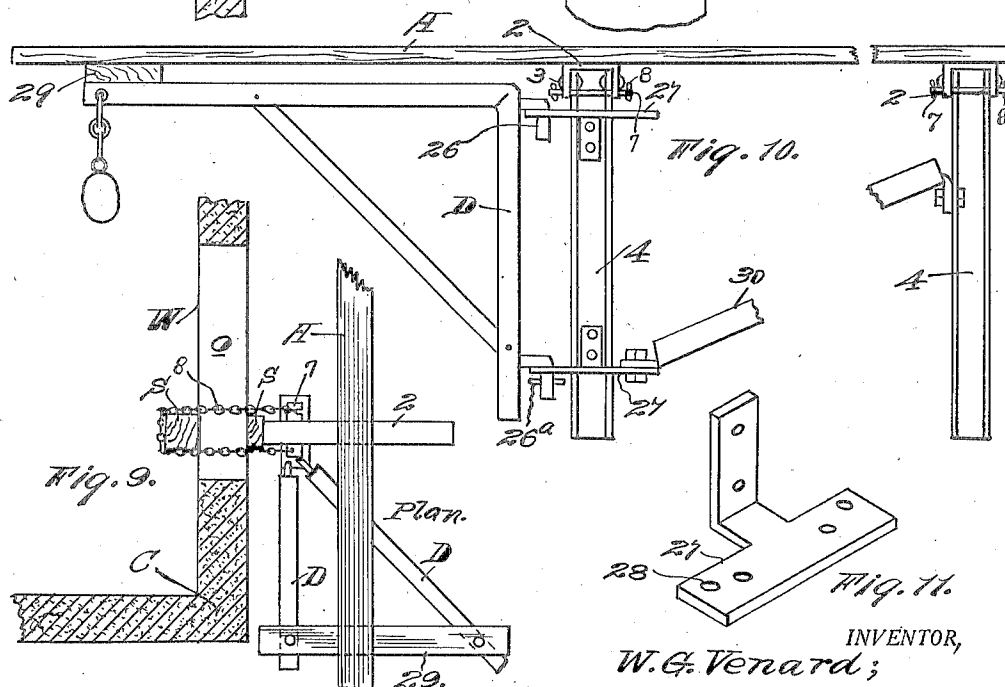
W. G. VENARD

1,712,974

SCAFFOLD BRACKET

Filed Sept. 6, 1927

2 Sheets-Sheet 2



INVENTOR,
W. G. Venard;
BY
F. E. Maynard, ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM G. VENARD, OF LOS ANGELES, CALIFORNIA.

SCAFFOLD BRACKET.

Application filed September 6, 1927. Serial No. 217,814.

This invention relates to contractor's equipment and more especially to scaffold brackets.

It is very desirable to provide a simple, practical, safe and easily erected bracket means whereby to support temporary platforms, derricks and other equipment, and more especially to provide a bracket device which may be readily attached to divers forms of principal supports such as may be permanently or temporarily in place in many kinds of structures and structural elements.

An object is to provide a bracket structure of ample strength and not excessive cost, and to provide a bracket whose application may be accomplished safely by unskilled labor.

A further object is to provide a bracket whose parts are of simple stock material involving a very minor degree of cutting and shaping; the intention being to reduce or wholly eliminate requirement of complex parts, to obtain strength and rigidity and at the same time enable use of light weight material, and employ a simple mode of assembly and application, and where necessary provide for effective adjustment of elements as to length and height.

Numerous additional objects, advantages and features of construction, combination and detail elements will be made manifest in the following specification of the herewith illustrated apparatus; it being understood that modifications, variations and adaptations may be resorted to within the scope, principle and spirit of the invention as it is more directly claimed hereinafter.

Figure 1 is a plan of a bracket as applied to a pile; platform planks being shown in dotted lines.

Figure 2 is a sectional elevation of the device of Fig. 1.

Figure 3 is an end view of a portion of the bracket.

Figure 4 is a side view of the bracket and extension parts.

Figure 5 is a plan of a part of a bracket arm and a stanchion socket thereon.

Figure 6 is a perspective of an auxiliary, safety bracket clamp.

Figure 7 is a diagrammatic view showing use of the brackets upon a ferry-slip pile system.

Figure 8 shows a vertically sectioned wall with primary supports stood at a window

therein, and showing a bracket attached to said supports.

Figure 9 is a plan thereof.

Figure 10 is a front elevation showing a bracket carrying an auxiliary, corner bracket crane.

Figure 11 is a perspective of a detached stirrup.

Figure 12 is a perspective of a form of bracket for supporting a crane or derrick rig.

The invention is shown as being embodied in variant forms all involving the same principle which consists of a bracket toeing against a vertical, primary support and held in position under tension of a bight of chain whose ultimate tension is acquired by a lever-like action of a component of the bracket moving about an upper toe for a fulcrum to tighten up the slung bight.

The bracket structure is shown as adapted for supporting a workmen's platform in several figures and in Fig. 12 is shown as adapted to form a journal for use of a swinging derrick or crane; no platform arm being utilized.

The platform bracket includes a lever arm 2 preferably of channel-iron having an inner toe end 2^a just back of which is a transverse pivot 3 of the upper end of a bracket leg 4, of channel-iron with outwardly turned flanges, and having a bottom toe 5.

Beyond the pivot 3 is a transverse key or hitch bar 7 to one end of which is connected a piece of chain 8 to be thrown around a primary support, as a pile P (or other element) and whose free end is then hitched on the hitch key at the slot 7^a thereof while the lever arm 2 is in an angular position with the key 7 in a plane higher than the pivot 3 and with the toe 2^a resting against the support (P). It will be seen that the bight of chain 8 will be highly tensioned as the arm 2 is forced down until the key hitch lies just below the pivot 3. When so applied the outer end of the arm 2 is bolted down on the outer end of a diagonal brace-piece 10 whose lower end is attached at 11 to the foot of the leg 4.

By making the parts 2, 4, 10 of channel-iron, lightness and great strength are had; these parts meshing one in the other respectively.

To provide for adjustment of the bracket device to increase the length of its arm part

an extension arm section 2^b is provided to be bolted at 12 up to the arm 2. The main leg 4 is detached from arm 2 and is lowered, and a supplemental leg-joint 4^a is hung on the pivot 3 and is bolted at 13 to the leg 4. The brace 10 and an outer brace 15 are fastened up when the arm 2—2^b is forced down to tighten the bight of chain 8, as above described.

10 When the extended form of bracket of Fig. 4 is employed it may be desirable to increase the factor of safety against danger of breaking and slipping of the bracket and for that purpose a chain bight, tensioning lever 20 having lateral, upper and lower toes 21—22 is applied to the leg 4; the lever having a bight hitch or key 7 for the chain 8. Rocking the lever over its toe 21 will tension or release the chain, according to direction of lever movement.

To increase the safety of workmen on the platform A laid on a string of the brackets, the outer ends of the arms may have a stanchion socket 24 to receive stanchions 25 of a suitable rail or rope guard.

The present invention has use in erecting a platform A along the outer face of a wall W having window openings O. In such a case studs S are stood against the wall, inside and outside, at the opening O and a bracket has its chain 8 thrown around the two studs and tensioned, Fig. 8 and 9. Plank platform A is then laid on the arms 2. To support the overhanging ends of the planks near the corner C of the wall crane-like derricks or brackets D having hooks 26 are hung on the stirrups 27; these having holes 28 for the hooks. A pair of the crane brackets D is employed and they are relatively angularly disposed so that a cross-plank or bolster 29 can be laid parallel to the bracket arm 2 and form a base for the overhang of the platform A.

The stirrups 27 will be attached only to those brackets which are at the ends of the proposed or laid platform A. The hooks 26 are held in place by a safety key or pin 26^a. A string of the brackets may be diagonally tied by links 30, of which one is shown.

50 A lever-type form of the bracket is shown in Fig. 12 and comprises an upper toe 21^a and a bottom toe 22^a integral with a connecting leg part 20^a, somewhat similar to the device 20, Fig. 4. The back of leg 20^a has a cross-piece 7^a to one end of which the chain 8 is attached and the other end of the chain is hitched to the slotted part 7^b; the cross-piece being disposed near the upper toe

21^a. Upper and lower stirrups 27^b provide journals for the inserted hooks 26, Fig. 10, of a swinging crane or derrick when applied to the bracket 20^a, which is devoid of platform arms and is designed to be attached to studs or columns and support an applied derrick such as may be used for general hoisting purposes.

It is understood that the members forming the different brackets may be made of various sizes and lengths, and desired material.

What is claimed is:

1. A contractor's equipment bracket including a top arm, an upright leg pivoted thereon, said parts having upper and lower support-engaging toes, a bight of chain to wrap around the engaged support, and a chain hitch, for the bight connected to the arm beyond its pivot so as to be effective to tension the chain by lever action of the arm; the said leg having upper and lower stirrups for pivotally supporting an applicable equipment part.

2. A contractor's equipment bracket including a vertical member with an abutment toe at its lower end, and a horizontal rest arm pivoted on the upper end of the said member and having an abutment toe portion on its inner end, a support engaging chain bight, and said arm having a hitch disposed outwardly from and in a line below its pivot for the bight and whereby the bight is tensioned on a support as the arm is brought horizontal.

3. Contractor's equipment including a bracket having an upright member with a toe on its foot end, a platform arm pivoted on the upper end of said member and having a toe end beyond the pivot, a chain bight, a hitch means on the arm for the chain ends, and a brace for connecting the remote ends of the arm and said member said arm operative to tension the bight by tilting on its pivot.

4. Contractor's equipment including a vertical leg structure having an abutment toe on its foot end, a horizontal arm pivoted on the top of said leg and having an abutment toe on the upper end of the structure, a bight of chain and a hitch means on the upper end of the structure for tensioning the bight on a support to hold the toes applied thereto, a swinging crane-like device having pivot hooks, and stirrup plates on said structure to receive the said hooks.

WILLIAM G. VENARD.