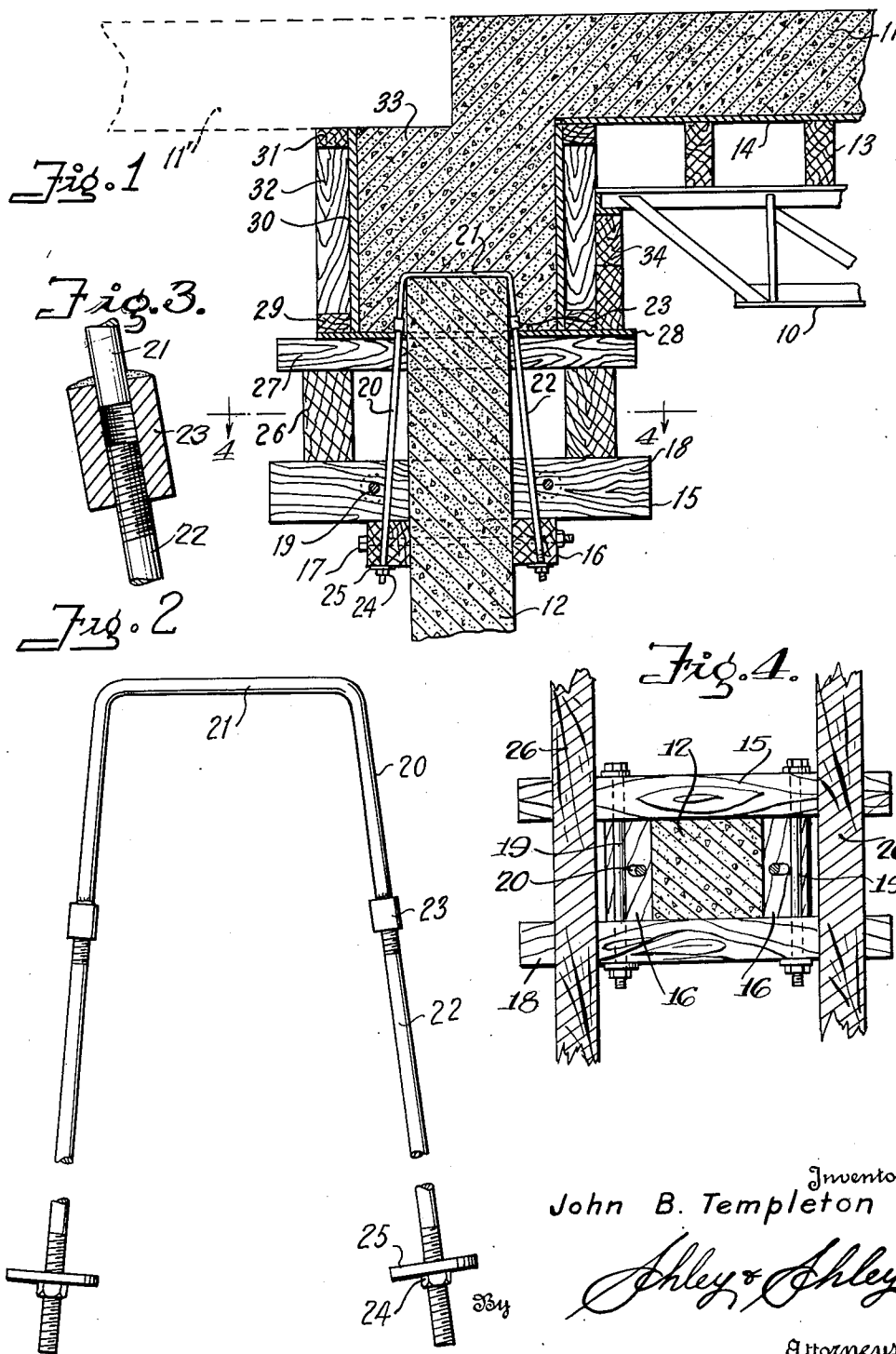


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ROADWAY LOAD HANGER
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ROADWAY LOAD HANGER

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This invention relates to new and useful improvements in roadway load hangers.

In building concrete bridges and roadways across creek beds, gullies and other depressions, it is customary to provide piles carrying cap beams integral with concrete slab units. In pouring the concrete it is the practice to use hanger frames on the piles with false work in the spans between the piles for supporting forms. Since the slab unit terminates over the center line of the pile, the load is substantially all on one side of said pile and this load tends to displace or tilt the hanger frame and throw the form out of line. In an effort to overcome this difficulty, temporary pilings have been used for the medial portion of the span false work; however, such temporary piling is expensive, frequently inconvenient to erect and not economical.

One object of the invention is to provide for each pile, a load hanger adapted to engage over the top of the pile and support the hanger frame against tilting or displacement whereby the load is adequately balanced and carried and the temporary piling and false bents are eliminated.

Another object of the invention is to provide a load hanger including a stirrup or saddle engaged over the top of the pile with dependent side members detachably secured to the stirrup, whereby the side members may be removed with the hanger frames and the stirrup left embedded in the cap beam.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing, wherein an example of the invention is shown, and wherein:

Fig. 1 is a longitudinal sectional view of a portion of a concrete roadway and its false work with the load carried by a hanger constructed in accordance with the invention.

Fig. 2 is an enlarged elevation of the hanger,

Fig. 3 is a detail of one of the couplings, and

Fig. 4 is a horizontal, cross-sectional view, taken on the line 4—4 of Fig. 1.

In the drawings the numeral 10 designates an open web beam which forms part of the false work carrying the concrete slab 11 between the piles or piers 12, located at each end thereof, only one of which piles is shown. Transverse joists 13 are mounted on the beam and sheathing 14 forms the bottom of the form on which the slab is poured. The concrete pile 12 has a hanger

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frame, indicated generally by the numeral 15, clamped thereon. This frame includes a pair of bars 16 clamped against the flat sides of the pile by cross bolts 17 and a pair of cross strips 18 rest on the bars at right angles thereto and are clamped on the remaining flat sides of the pile by tie bolts 19.

The hanger frame is clamped on the pile a substantial distance below the top of said pile. A metallic load hanger, indicated generally by the numeral 20, is carried on the pile. The hanger is generally U-shaped in cross-section. The hanger includes a stirrup or saddle 21 and side rods 22 detachably secured to the legs of the stirrup by couplings 23. The upper ends of the rods and the lower end of stirrup legs are screw-threaded to receive the internally screw-threaded couplings. The lower ends of the side rods are screw-threaded and pass through the bars 16 between the strips 18. Nuts 24 on the lower ends of the rods support washers 25 which bear against the under sides of the bars 16. While the hanger frame 15 is clamped on the pile it is hung and supported by the hanger 20.

A pair of stringers 26 rest on the frame 15 at right angles thereto and cap joists 27 are carried across these stringers. Sheathing 28 is laid on the cap joists longitudinally of the stringers. It is to be understood that there are a number of piles 12 disposed transversely of the slab 11, but only the structure at a single pile is described because the invention resides primarily in the hanger 20.

Longitudinally of the sheathing and over the stringers, liners 29 are fastened and the lower edge portions of side sheathing 30 are nailed to the inner edges of said liners. Cap liners 31 are secured to the outer upper edge portions of the side sheathing and rest upon upright studs 32 supported on the liners 29 and fastened to the side sheathing. The sheathing 28 and side sheathing 30 constitute a form for the concrete cap beam 33. It will be noted that the pile extends through the sheathing and the upper end of the pile, the stirrup 21 and couplings 23, are embedded in the bottom of the beam. The couplings have their lower ends at the sheathing and exposed so that the side rods 22 can be unscrewed from said couplings.

Superimposed bolsters 34 rest on sheathing 28 below the slab 11 and the end of the web beam 10 rests upon the upper bolster. The sheathing 14 rests on the cap liner 31 above the bolsters and overhangs the upper edge of the adjacent side sheathing 30. The structure which has been

described is duplicated at the opposite end of the slab which is now shown.

It is customary in building this type of roadway to mold or cast said roadway in slab units. While the cap beam 33 is poured complete, the slab 11 is terminated on the vertical center line of the pile 12 and obviously the load is on one side of the pile, as is shown on the right hand side of Fig. 1. If the hanger 20 was not used the load would be imposed upon the right hand side of the hanger frame 15 and thus, tend to tilt said frame or force it downwardly on the pile. In order to avoid this difficulty intermediate piles have been used for supporting the medial portion of the slab. The hanger being balanced across the pile and having its side rods anchored maintains the hanger frame in a horizontal position and prevents tilting or displacement of said frame.

When the concrete slab 11 and cap beam 33 and the additional slab 11' shown in dotted lines have "set" or cured to the required degree, the false work is removed. In removing the false work, the nuts 24 are unscrewed from the hanger rods 22; the washers 25 removed and said rods are then screwed out of the couplings 23, which latter are left embedded in the bottom of the cap beam 33. The hanger frame 15 and the false work are then taken down in the usual manner.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. A hanger device for concrete structures including, an inverted U-shaped hanger having outwardly flared depending side legs, side rods detachably connected to the lower ends of the legs, and a rectangular frame comprising a lower pair of parallel bars adapted to snugly embrace the sides of a post and in which the lower ends of the rods are secured and an upper pair of parallel bars crossing and resting upon the lower bars at right angles thereto adapted to snugly embrace the sides of a post.

2. A hanger as set forth in claim 1, with bolts connecting the ends of the lower bars, and bolts connecting the ends of the upper bars.

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