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R. W. DUGGAN

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ANCHOR BRACKET

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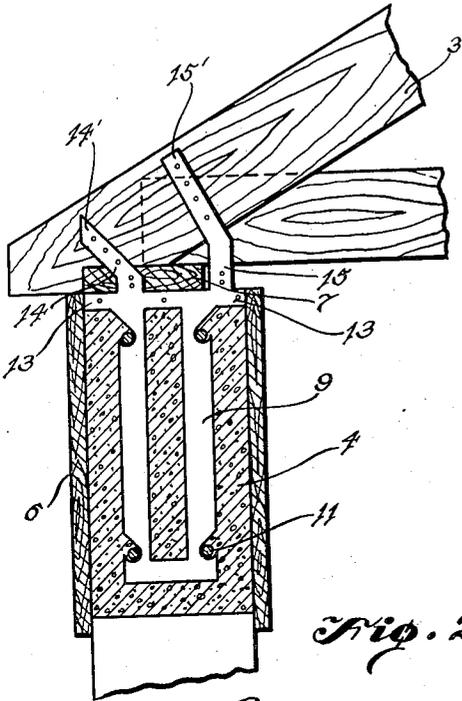


Fig. 2.

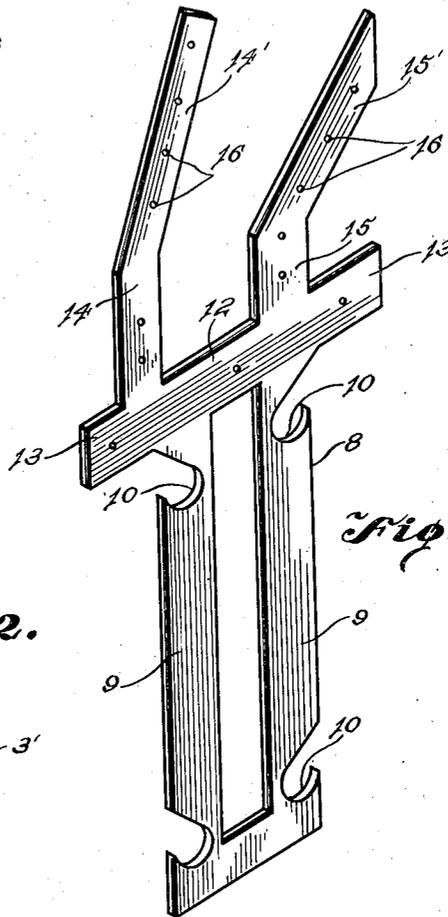
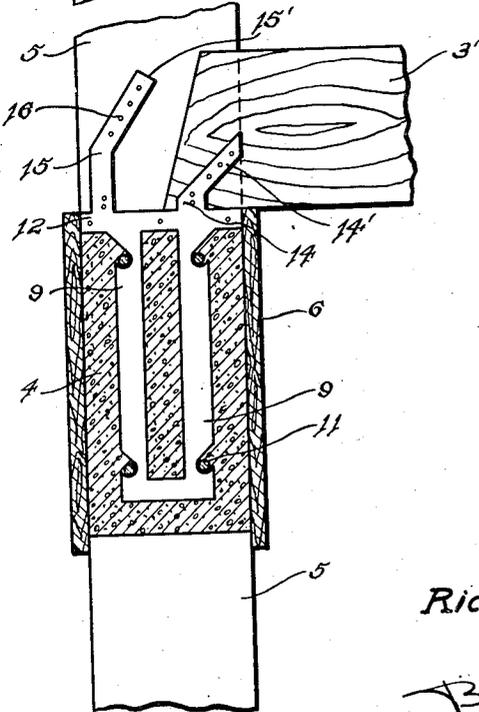


Fig. 1.

Richard W. Duggan INVENTOR.

BY Bernard F. Lawley  
ATTORNEY

# UNITED STATES PATENT OFFICE

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## ANCHOR BRACKET

Richard W. Duggan, Miami Beach, Fla.

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6 Claims. (Cl. 72-108)

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This invention comprises an anchor bracket for buildings having especial adaptation for use as a combination reinforcing rod supporting bracket, a roof rafter anchor and a floor joist anchor.

It is within the objects of this invention to provide an anchor which may be used in either the roof or the floor, without any change in its construction, to supplant the expensive and time consuming methods presently employed, such as suspending reinforcing rods by wires, and spacing forms through the employment of spacing bars. The unit bracket of the present invention will retain the forms spaced a predetermined distance, hold the reinforcing rods in proper position during pouring of concrete and positively anchor the floor joists and roof rafters to the concrete tie beams.

Other objects of the invention will be apparent from the following description of the present preferred forms of the invention, wherein:

Figure 1 is a perspective view of an anchor bracket constructed in accordance with the present invention; and

Figure 2 is a side elevational view of a pair of the brackets illustrating their application as applied to a roof rafter, floor joist and building wall.

In order to illustrate the application of this invention, I have in Figure 2 of the drawings shown a portion of a building including a roof rafter 3, floor joist 3', a concrete tie beam 4, and a cement block wall 5. The tie beams are circumscribed by forms 6 in a manner well known in the art. In addition, in accordance with standard building construction, I have interposed a plate 7 between the roof rafter and the upper terminal of the top concrete tie beam 4.

The bracket of the present invention comprises a flat plate preferably made of sheet metal, the body 8 of which is of rectangular or closed U-shape and comprising a pair of parallel sides 9. Each of the sides is provided near its terminal with a reinforcing rod receiving groove or recess 10. These grooves are adapted to receive reinforcing rods 11, as illustrated in Figure 2. The top of the body is closed by a bar 12 formed integral with the sides 9 and extended beyond the marginal edges thereof to provide spacer arms 13 adapted to abut the inner walls of the forms 6, as also shown in Figure 2. Issuing from the upper margin of the spacer bar 13 are a pair of extensions or legs 14 and 15, the free ends of which are offset in the same direction. Attention is particularly directed to the fact that the root of the leg 14 is uniplanar with the longitudinal axis of

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one of the sides of the body 8. Conversely, the root of the leg 15 is completely offset from the longitudinal axis of the opposite side of the body 8. The legs 14 and 15 as well as the offset extensions thereof, 14' and 15', are provided with apertures 16 for use in anchoring the bracket to rafters, joists and form braces.

It is to be understood that the device of this invention serves:

(a) As an anchor for roof rafters as required by the building codes;

(b) As an anchor for floor joists by reversing the bracket as shown near the bottom of Figure 2, as also required by the building code;

(c) As a bracket to support reinforcing rods in proper position in concrete tie beams, after the fashion illustrated in Figure 2 as also required by the building codes.

In use of this bracket for anchoring a rafter to the tie beam, the anchor is positioned in the form as shown at the top of Figure 2 and the reinforcing rods 11 engaged in the grooves 10. The arms 13 automatically space the sides of the form 6. Consequently, the concrete of the tie beam is formed of a predetermined width reinforced by the rods 11 supported in the desired loci. The offset end 15' of the leg 15 is anchored to the rafter 3 in an obvious manner. When the bracket is used to anchor a rafter to a concrete tie beam, the offset end 14' of the leg 14 may be bent over flush with the top of the tie beam. When, however, the bracket is used to anchor the floor joist 3' to the concrete tie beam, the offset end 14' of the leg 14 is used as shown at the bottom of Figure 2 of the drawing. The offset end 14' is adapted to engage a portion of the floor joist which overhangs the top of the lower concrete tie beam 4. When the bracket is used to anchor a joist to the concrete tie beam, the offset end 15' of the leg 15 is engaged with the cement block wall 5. The body 8 of the bracket is embedded in the concrete tie beam just the same as when the bracket is used in reverse for engaging the roof rafter with an upper tie beam.

Although I have herein described a preferred form of the invention, I am of course aware that various changes may be made therein within the scope of the appended claims. It is, however, of importance in the present invention that a bracket be provided which is adapted for use in securing the rafters of a building to the tie beams and also by mere reversal used for securing floor joists to the tie beams. The manner of securing the bracket to the rafters and joists may vary, but I have found that satisfactory anchorage is ob-

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tained by driving spikes through the rafters or joist and the openings 16 of the bracket. Also, by mounting the brackets in the concrete at right angles to the reinforcing rods, shrinkage and temperature reinforcement is provided for.

What I claim is:

1. An anchor bracket for use in the building industry comprising a flat substantially U-shaped plate the legs of which at the open end of the U are offset in the same general direction and within the plane of the plate, said legs being also provided inwardly from the open end of the U with notched edges for engagement with concrete reinforcing rods, and projections extending laterally from the legs intermediate the ends thereof and arranged in alignment to provide a form spacer.

2. An anchor bracket for buildings comprising a body one end of which is formed to provide a plate-like portion for engagement in a tie beam, the opposite end formed to provide a U-shaped portion presenting legs one of which is adapted for engagement with the part of the building which is to be anchored to the tie beam, and parts of the body extending laterally from the plate-like end thereof to provide spacers, the free ends of said legs being offset.

3. A bracket for use in anchoring roof rafters and floor joists to concrete tie beams, including a rectangular body adapted to be embedded in the tie beam and provided with marginal recesses for the reception of reinforcing rods, parts of the opposite sides of the body being extended to provide spacer arms, further parts issuing from one end of the body to provide legs, one of which is adapted for engagement with a rafter, the other of said legs being adapted for engagement with a joist.

4. As a new article of manufacture, an anchor bracket for securing various building elements with reference to a building wall, formed from a single blank of material, cut, shaped and dimensioned to provide as an integral unit a flat plate-like member for disposition between the opposed walls of a concrete pouring form and having the edge portions thereof notched to receive therein concrete reinforcing rods, angular anchor ele-

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ments extending from the top thereof for attachment respectively to roof rafters and floor joists, and a concrete pouring form spacer bar at the junction of the plate-like member and the anchor elements.

5. Means for anchoring a roof rafter and floor joist to a concrete tie beam, comprising a plate embodying a pair of parallel sides, the outer margin of each of which sides is provided with reinforcing rod receiving recesses, the plate also including a bar integral with said parallel sides at one end, the terminals of the bar extending beyond said outer margins of the parallel sides to provide spacer arms for the form of a concrete tie beam, the plate further including an extension issuing from said bar for engagement with a roof rafter or floor joist, said extension being offset from the long axis of the parallel sides.

6. An anchor bracket for buildings comprising a bracket body one end of which is adapted for mounting in a concrete tie beam form, an intermediate part of the body extending beyond the sides of said bracket body end for engagement with opposite walls of the concrete form to retain the walls in predetermined spaced relation, the opposite end of the bracket body being engaged with the part of the building which is to be anchored to the tie beam.

RICHARD W. DUGGAN.

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