Jan. 24, 1928. 1,657,243

E. S. DANIELS

JOIST AND RAFTER SUSPENSION BRACKET

Filed Dec. 6, 1924

Fig. 1.

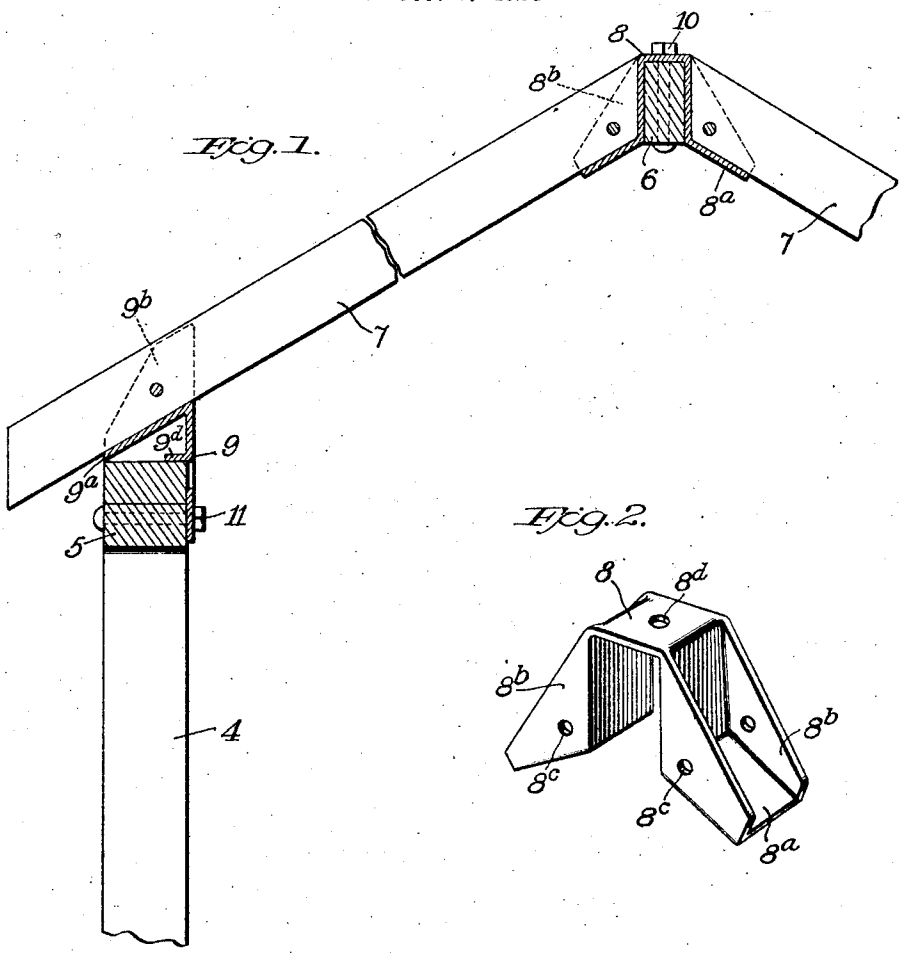
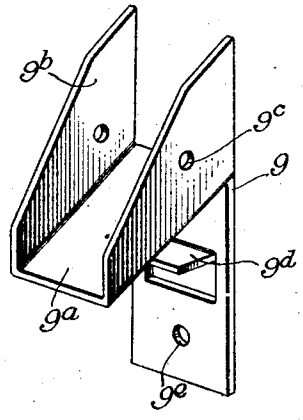


Fig. 2.

Fig. 3.



Inventor

Ernest Stuart Daniels

By Dowell & Dowell

his Attorneys

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UNITED STATES PATENT OFFICE.

ERNEST STUART DANIELS, OF WASHINGTON, DISTRICT OF COLUMBIA.

JOIST AND RAFTER SUSPENSION BRACKET.

Application filed December 6, 1924. Serial No. 754,303.

This invention relates to frame supports or hangers and more particularly to brackets for supporting and bracing the joists, beams and rafters of steel and wooden buildings.

The principal object is to provide strong and practical brackets by which joists, beams, rafters and other parts of the skeleton structure of a building may be easily and quickly secured rigidly in place at both ends, with great saving in time and labor and without necessity for mortising or the use of nails, as in the ordinary mode of assembly, thus facilitating and expediting the work of construction, especially in the erection of "ready-made" or "ready-cut" houses, garages, contractors' sheds and other buildings.

Simplicity in design and inexpense in cost of manufacture are further desiderata which have been borne in mind in the production of my improved frame supporting brackets.

The invention will first be hereinafter more particularly described with reference to the accompanying drawings, which are to be taken as a part of this specification and then pointed out in the claims at the end of the description.

In said drawings, Fig. 1 is a fragmentary front elevational view of the elementary structure of a building, partly in section, illustrating the manner in which rafters are secured between the ridge-beam and wall-truss or "head-plate" by means of my improved supporting brackets;

Fig. 2 is a perspective view of the ridge-beam bracket; and

Fig. 3 is a perspective view of the wall-truss bracket.

Referring to the drawings in which like reference numerals are used to indicate corresponding parts throughout the several views, 4, 5 and 6 respectively denote the upright wall posts, the horizontal head-plate and ridge-beam of a building.

Spaced rafters 7 are supportingly secured on the usual incline between ridge-beam and head-plate, by means of cooperative brackets 8 and 9, which are respectively bolted or otherwise fixed in place upon said beam and plate as shown.

The bracket 8 comprises a two-part or double-sided saddle like metallic casting adapted to straddle the ridge-beam or other truss and formed with oppositely disposed stirrup or ledge portions 8^a inclined on either side of the beam at an angle corresponding with the pitch or slope of the roof, the inclination being varied as desired for different roofs. Vertically disposed, triangularly-shaped flanges or bracing walls 8^b having aligned bolt holes 8^c, are provided on opposite margins of the inclined ledge portions 8^a, between which the ends of a beam or rafter may fit, the same being secured in place by means of ordinary holding bolts extended through the holes 8^c and the intervening timber. A bolt hole 8^d is likewise provided in the top portion of said casting, through which a fastening bolt 10 extending vertically through the ridge-beam, is passed to hold the bracket in fixed position thereon.

The bracket 9 comprises an angular metallic casting adapted to engage upon the head-plate or other beam and formed with an open ended stirrup or ledge portion 9^a inclined at an angle corresponding with the pitch or slope of the roof, the inclination being varied as desired for different roofs. Vertically disposed, triangularly-shaped flanges or bracing walls 9^b, (corresponding with the walls 8^b of the bracket 8) having aligned bolt holes 9^c, are provided on opposite margins of the inclined ledge portion 9^a, between which one end of a beam or rafter may fit, the same being secured in place by means of an ordinary holding bolt extended through the holes 9^c and the intervening timber. A horizontally extended shoulder-piece or abutment 9^d formed by stamping and bending out a portion of the metal and adapted to rest upon the head-plate or other beam to which the casting may be fastened, is provided on the vertical body part thereof, a bolt hole 9^e being also provided therein, through which a fastening bolt 11, extending horizontally through the beam, is passed to hold the bracket in fixed position thereon.

The novelty, utility and advantages of my improved rafter, beam and joist supporting brackets will be obvious from the foregoing description. Since various minor changes in the details of construction and arrangement of parts may be made without departing from the spirit and scope of this invention, I do not desire to be restricted by the appended claims, to the specific structure hereinbefore illustrated and described.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A metal bracket of angular form adapted to fit against vertical and horizontal sides of a beam for securing thereto the inclined end portion of a rafter; said bracket having a main upright portion and an integral outwardly and downwardly inclined extension at the upper end of the upright part provided with marginal flanges having aligned bolt holes therein for securing the end portion of the rafter therebetween; a shoulder piece or rest being punched or stamped out of said upright portion and adapted to rest upon the beam for supporting the bracket thereon; said upright part also having a bolt hole therein for securing it to the vertical side of the beam.

2. A supporting bracket adapted to fit against and over vertical and horizontal faces of a beam or joist for securing the end portions of beams or rafters thereon, said bracket comprising a metallic casting formed with an integral vertical main body and an inclined ledge portion of flat plate form, the latter being extended outwardly and downwardly from the former and having opposed vertical substantially triangular marginal flange portions integral therewith and with said main body portion between which the end of a beam or rafter is interposed in resting position on said ledge portion, said flange portions being provided with aligned holes therein for securing therebetween the end of a beam or rafter in supported position on the bracket.

In testimony whereof I affix my signature.

ERNEST STUART DANIELS.