

Oct. 14, 1924.

1,511,652

T. J. CALLAHAN
PURLIN SUPPORTING BRACKET

Filed Nov. 8, 1921

2 Sheets-Sheet 1

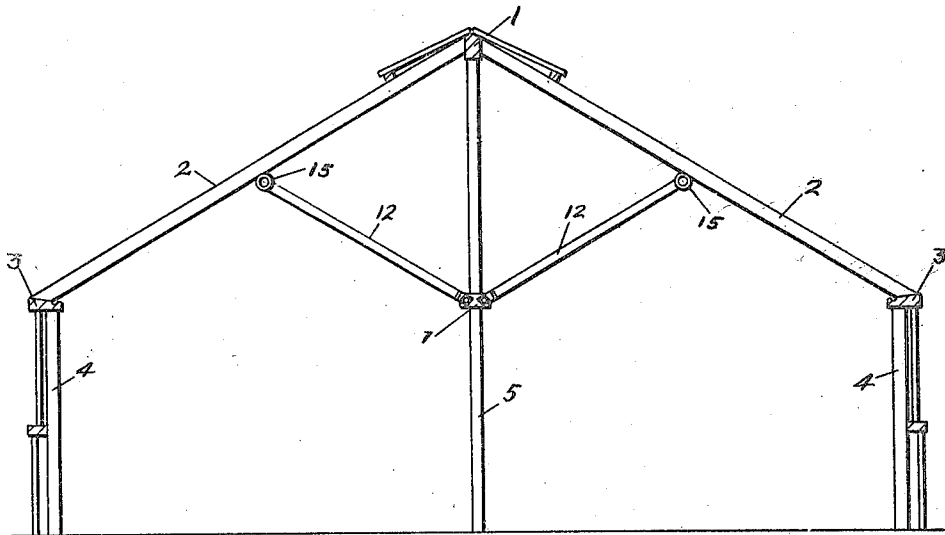


Fig. 1

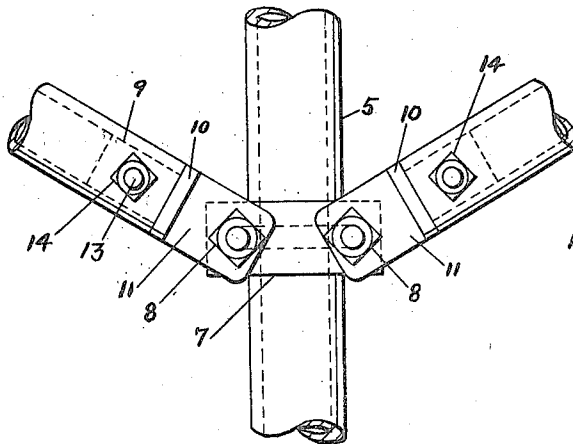


Fig. 2

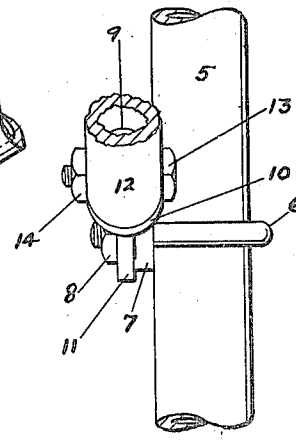


Fig. 3

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2 Sheets-Sheet 2

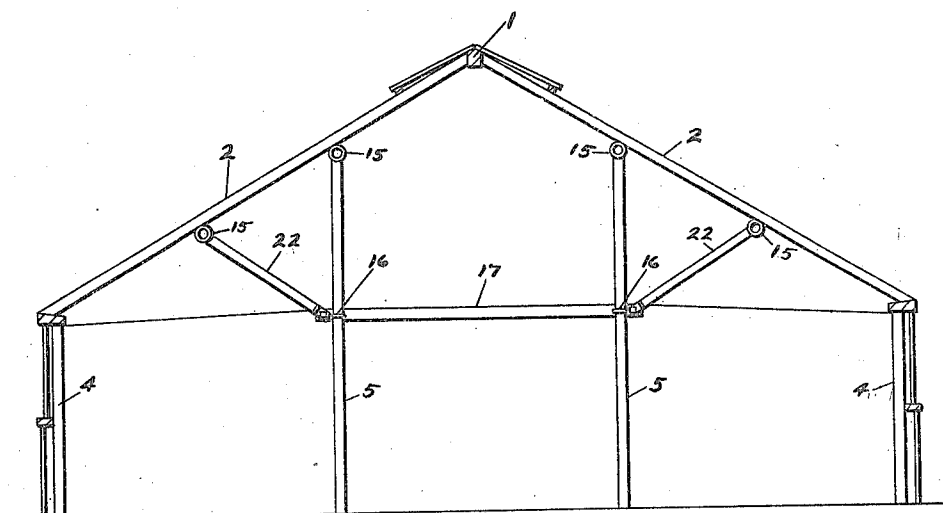


Fig. 4

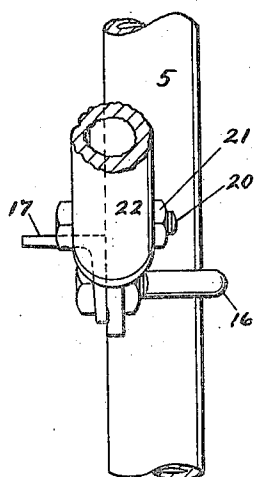


Fig. 6

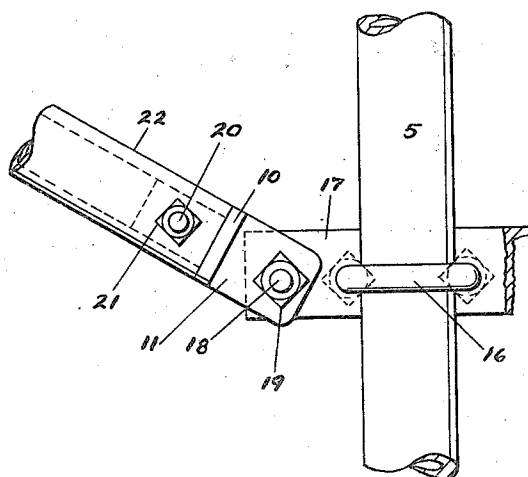


Fig. 5

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UNITED STATES PATENT OFFICE.

THOMAS J. CALLAHAN, OF DAYTON, OHIO.

PURLIN-SUPPORTING BRACKET.

Application filed November 8, 1921. Serial No. 513,659.

To all whom it may concern:

Be it known that I, THOMAS J. CALLAHAN, a citizen of the United States, residing in the city of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Purlin-Supporting Brackets, of which the following is a specification.

One of the principal objects of my invention is to provide a simple, strong and durable bracket for firmly supporting a purlin or other structural member. It is more rigid than the ordinary bracket, it is easy to manufacture, and is adapted to take a firm grip upon the standard to which it is applied. While it is particularly adapted as a purlin brace for greenhouses, it may be equally as well employed as a support or brace in other structures.

Other important and incidental objects will be brought out in the following specification, and particularly set forth in the subjoined claim.

In the accompanying drawings, Figure 1 is a cross sectional view taken through a greenhouse, showing my improved bracket applied to a supporting post for the ridge pole. Figure 2 is a front view of my supporting bracket when adapted for attachment to said post. Figure 3 is an end view thereof. Figure 4 is a cross sectional view taken through a greenhouse having a double roof-support, showing how my purlin supporting brackets are applied to the cross member that is secured to the supporting posts. Figure 5 is a front view of one of said posts and the cross member, showing how one of my brackets is secured to the latter. And Figure 6 is an end view thereof. Throughout the specification and drawings, similar reference characters denote corresponding parts.

While the subject of the invention has a multiplicity of uses, it will first be described in its form for attachment to a single center post or standard of a greenhouse, for the purpose of supporting the tubular braces or supports of the purlins. Referring to Figure 1 for an outline description of this greenhouse structure to which my invention applies, the numeral 1 designates a ridge pole from which rafters 2, 2 incline downwardly to two horizontal supporting beams 3, 3 that are mounted upon side posts 4, 4 respectively. Forming one of the supports for the

ridge pole 1 is a center post or standard 5.

Applied to the middle portion of the post 5 is a U-bolt 6 whose free ends, which are threaded, project through holes in a metallic cross member 7. Nuts 8, 8 are screwed on the outer threaded ends of the U-bolt 6 to press the cross member 7 tightly against the post 5. (See Figures 2 and 3.) While the means just described are preferred for firmly holding the cross member 7 on the post 5, any other suitable means may be employed for this purpose if desired.

Secured to each end of the cross member 7 by one end of the U-bolt 6 and one of the nuts 8, is a bracket casting constructed as follows. Referring to Figures 2 and 3, this casting has an outer end 9 which is cylindrical, a central annular flanged portion 10, and an inner end 11 that is flattened on two sides. The threaded ends of the U-bolt 6 are adapted to be thrust through respective holes provided in the lower parts of the flattened ends 11 of the two bracket castings, after which the nuts 8 are applied to the threaded ends of the U-bolt to tightly press the flattened ends of the bracket castings against the cross member 7, and the latter in turn against the post 5.

Fitted on the cylindrical end 9 of each bracket casting is the lower end of an elongated tube 12 which is adapted to bear against the annular flange 10 on the casting. After each tube 12 is so fitted on the cylindrical end 9 of its respective bracket casting, a bolt 13 is passed through holes in each of those members to receive on its outer end a nut 14 to tightly connect them together. (See Figures 2 and 3.) When so connected to its respective bracket casting, each tube 12 inclines upwardly to support or brace a purlin 15 in the greenhouse structure. (See Figure 1.) It will thus be seen that my improved brackets are adapted to be secured in a compact and rigid manner to a center post of a greenhouse or other building to firmly support the purlins thereof.

The employment of my improved brackets in a double roof-support will now be described. In Figure 4 two supporting posts 5, 5 are shown, one on each side of the ridge pole 1. Connected between the middle portions of the posts 5, 5 by means of U-bolts 16, 16 respectively, is an angle member 17. Secured in an upwardly inclined position, to each outer end of the angle member 17

by means of a bolt 18 and nut 19, is the flattened end 11 of a bracket casting similar to the one before described. Fitted on the cylindrical end of each casting above its annular flange 10, and rigidly secured to said end by a bolt 20 and nut 21, is the lower end of a tube 22 which supports one of the purlins 15 in the same manner they were supported by the tubes 12, 12 in Figure 1. It is thus seen how my improved brackets may be applied to the two posts 5, 5 in the structure shown in Figure 4, to firmly and rigidly support the purlins thereof. In this structure the brackets are so connected to the angle member 17, and the latter is so secured to the posts 5, 5, that all of these elements together form a strong, compact and rigid support for the roof of the building. Similarly in the single post construction shown in Figure 1, my improved brackets so lend themselves to it as to make a strong, firm and rigid roof support.

I do not desire to be limited to the details of construction and arrangement herein shown and described; and any changes or

modifications may be made therein within the scope of the subjoined claim.

Having described my invention, I claim:

In a device of the type described, the combination with a standard, of a U-bolt applied thereto, threaded ends on said U-bolt, a cross member through which the threaded ends of the U-bolt project, a pair of bracket pieces, a flattened end on each bracket piece, through which the threaded ends of the U-bolt project, nuts applied to the threaded ends of the U-bolt outside the flattened ends of the bracket pieces, a cylindrical end on each bracket piece, an annular flange on each bracket piece between its cylindrical end and its flattened end, and a tube fitted on the cylindrical end of each bracket piece, adapted to bear against the annular flange thereon.

In testimony whereof I have hereunto set my hand this 4th day of November, 1921.

THOMAS J. CALLAHAN.

Witness:

HOWARD S. SMITH.