April 1, 1924. 1,489,038

P. L. McKEE

ROOF STRUCTURE

Filed Nov. 21, 1921

Fig. 1.

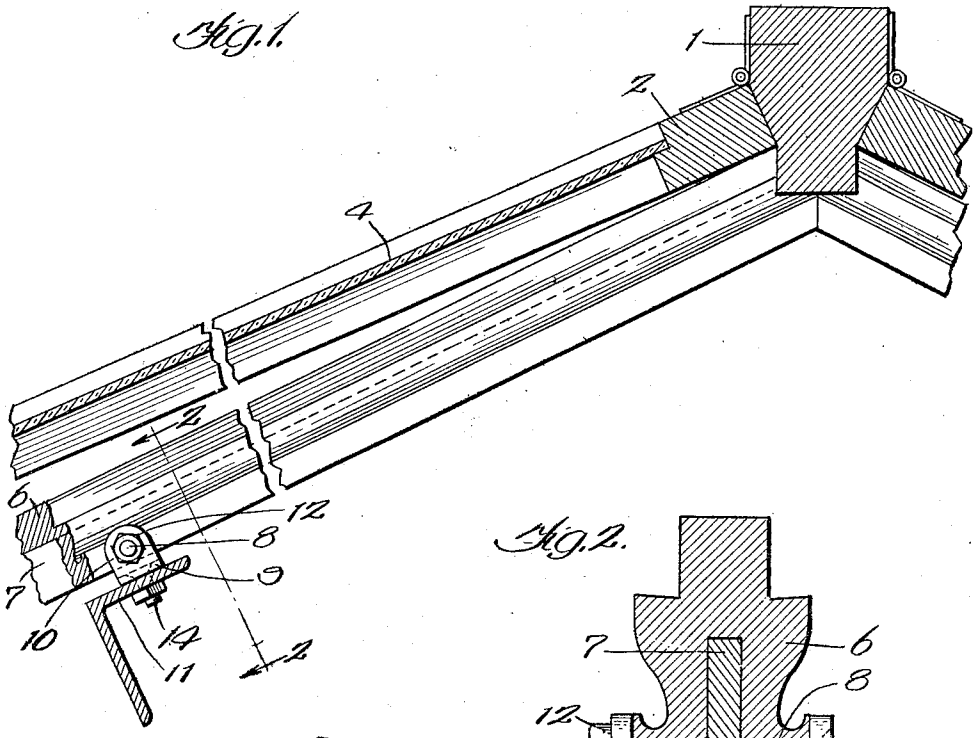


Fig. 2.

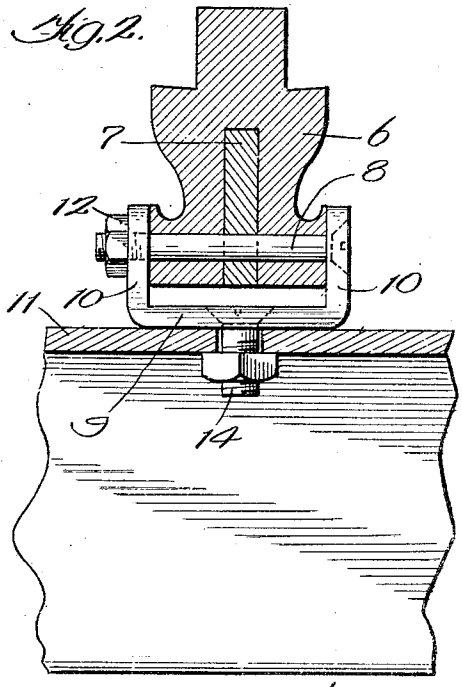
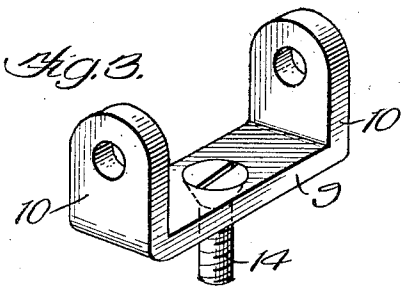


Fig. 3.



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UNITED STATES PATENT OFFICE.

PHILIP L. McKEE, OF CHICAGO, ILLINOIS.

ROOF STRUCTURE.

Application filed November 21, 1921. Serial No. 516,587.

To all whom it may concern:

Be it known that I, PHILIP L. McKEE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Roof Structures, of which the following is a specification.

My invention relates to roof structures, particularly for greenhouses, and the general object of the invention is to provide a rust-proof connection between the principal members, particularly the sash bars and the purlins. It is well known that in greenhouses there is always a high degree of moisture present, and this quickly rusts the nails or screws which have heretofore been commonly employed. Nails and screws also have the disadvantage that they mar the parts when inserted into the wood, and hence the parts are not collapsible in the sense of being usable repeatedly. My purpose is not only to provide a construction which will be strong, durable and practically permanent, but which will also make it possible to take down the parts and re-erect them as often as desired.

I accomplish my objects by the mechanism illustrated in the accompanying drawings in which—

Figure 1 is an assembly view of a portion of a roof truss embodying the invention.

Figure 2 is a sectional view on the line 2—2, Figure 1, and

Figure 3 is a perspective view of the clip which forms one of the principal elements of the invention.

Like numerals denote like parts throughout the several views.

In the form selected to illustrate the invention the roof structure has a ridge pole 1 to which is hinged a sash frame 2 carrying a pane 4 of glass. Running up to the ridge pole, for supporting the sash and strengthening the structure, is a sash bar 6, the upper portion whereof is formed in accordance with the usual practice. A metallic reinforcing strip 7 is sunk into the under side of the bar, as best shown in Figure 2. This strip is arranged on edge, as shown, and not only strengthens the bar, but is so housed in by the wood that the moisture is practically excluded from it, except at the bottom surface. A bar of this construction forms the subject of a separate application filed by me September 12, 1921, Serial No. 500,255.

The sash bar and its reinforcing strip are transversely apertured to receive the bolt 8 of a U-shaped clip having a base 9 and side arms 10 which contact the side of the sash bar. By preference the base of the clip is spaced from the bottom of the bar, but on the under side lies in contact with the upper leg of an angle bar 11 which constitutes the purlin. The base 9 of the clip is apertured at the center to receive a stud 14 which passes through the purlin for bolting the parts together. By preference the head of the stud is countersunk into the base, as illustrated.

One of the advantages of this construction is that the bolt 8 in passing through both the wood and the reinforcing strip of the sash bar, not only holds them together by penetration, but also by friction, for when the nut 12 on the bolt is screwed up tight, it will create a clamping action and the assemblage will be very secure. Another advantage is that the parts may be taken down or disassembled without injuring them. To take off the clip it is necessary merely to unbolt it, and the same is true of the stud 14. Thus the parts may be used over and over again without detriment. As the parts are all large in comparison to ordinary nails or screws, they are correspondingly durable and rust has little effect. Another advantage is that on account of the space between the base of the clip and the bottom of the sash bar, it is possible to insert a paint brush to paint the facing surfaces. This is of considerable advantage, for as above suggested, the excessive moisture in a greenhouse tends to cause rapid decay of the wood and rusting of the metal. Paint, however, prevents this.

From the foregoing it will be seen that the construction has all of the advantages ascribed to it. It is simple, durable, easy to assemble, can be taken apart an indefinite number of times without damage to any of the parts, and when the parts are assembled, the construction is most rigid and secure.

I claim—

1. In a roof structure for greenhouses, a sash bar, a purlin and a clip for supporting the sash bar on and fastening it to the purlin, said clip being U-shaped the bottom seating upon the purlin and having an aperture by which it may be bolted to it, the upstanding sides of the clip receiving the sash bar between them, said sides being transversely apertured, and a bolt passing through the

apertures in the sides of the clip and passing through the sash bar.

2. In a roof structure for greenhouses, a purlin, a reinforced sash bar consisting of wood having a metallic strip embedded in it, and means for shackling them together, said means comprising a U shaped clip having arms engaging opposite sides of the sash bar, a bolt passing thru both the wood and the metal of the sash bar and thru the arms of the clip, and means located between said arms for fastening the base of the clip to the purlin.

In witness whereof, I have hereunto subscribed my name.

PHILIP L. McKEE.