Aug. 1, 1939. G. G. GREULICH 2,167,836

HEAVY NAILER JOIST

Filed Dec. 29, 1937

FIG. 1.

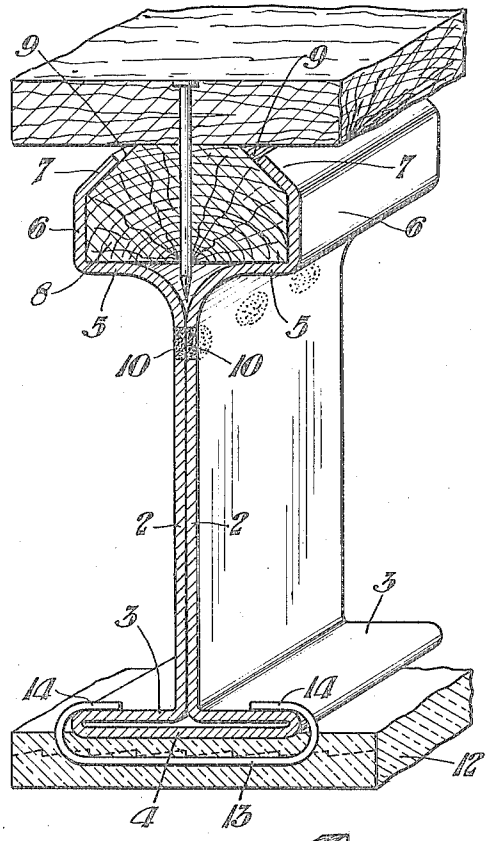


FIG. 2.

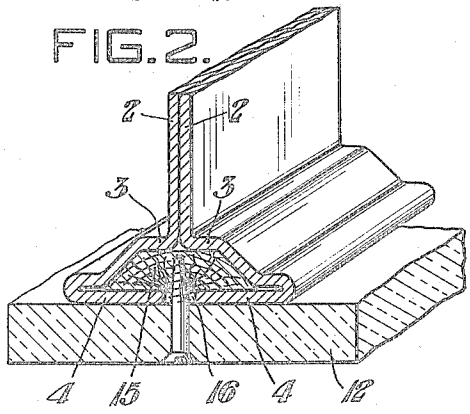
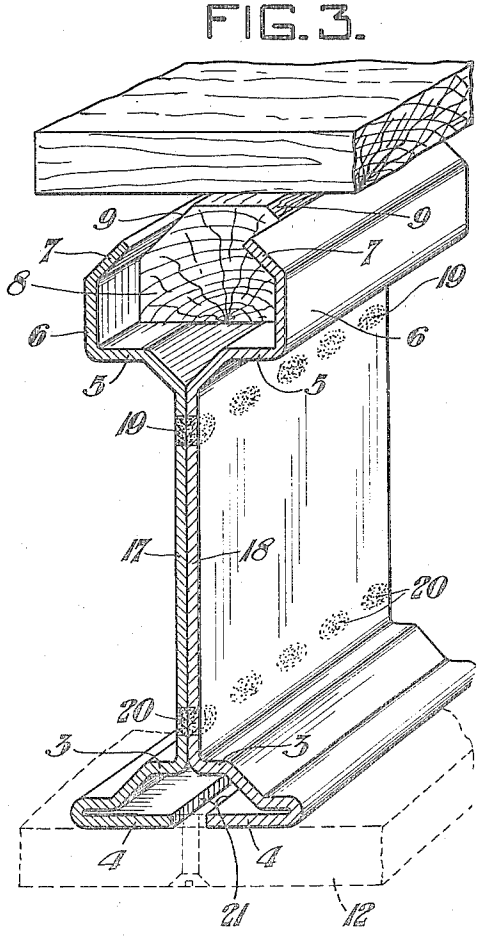


FIG. 3.



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HEAVY NAILER JOIST

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1 Claim. (Cl. 189—40)

This invention relates to a structural member for building use, and particularly to heavy weight nailer joists or studs.

An object of this invention is to provide a structural member which will exert a continuous pressure on the sides of a nailer strip.

Another object of the present invention is to provide an I-shaped structural member having at least one enlarged head portion to receive a nailer strip so that, upon welding of the portions forming the web, there is a spring-like pressure exerted on the top and sides of the nailer strip to hold it rigidly within the enlarged head portion.

Other objects and advantages will become apparent as the description proceeds, in which:

Figure 1 is a perspective of one form of the present invention;

Figure 2 is a detailed perspective of a modified form of the bottom flange portion shown in Figure 1; and

Figure 3 is a perspective of another form of the invention.

In the drawing, the I-shaped structural member is formed, as shown in Figure 1, by passing a sheet of relatively heavy gauge metal through a conventional type cold forming mill so as to provide a web-portion 2 having a double thickness of material, inner flange portions 3 extending outwardly from said web-portion and superimposing an outer flange member 4. The free ends of the web thickness are bent outwardly, as shown at 5, to form the inner portion of the upper flange, then upwardly, as shown at 6, and terminate angularly inwardly, as shown at 7. Such a construction provides, at one end of the web-portion, an enlarged head portion within which is positioned a nailer strip 8.

The nailer strip 8 may be wood or cementitious material and has the top outside corners beveled, as shown at 9. This nailer strip, which is inserted between the two sides 6, rests upon the upper flange portion 5 and, being slightly wider than the internal dimensions of the enlarged head portion, produces a spring-like tension upon said nailer strip when the web thicknesses are brought together and welded, as shown at 10. The inwardly directed portions 7 engage the beveled corner portions 9 of the nailer strip and exert a wedge-like action on said strip, forcing the same downward into intimate contact with the flange portions 5 while, at the same time, the side members 6 exert an inward pressure upon said nailer strip, thereby holding said nailer strip securely in position whether it shrinks or swells.

The bottom flange of said structural member may be secured to the plasterboard or ceiling, indicated at 12, by means of a wire clip 14 embedded therein and has its free ends bent upwardly and over the inner flange portions 3.

If desired, the bottom flange portion may be formed, as shown in Figure 2, to receive a nailer strip 15 of trapezoidal shape. The inner flange portions 3 may be bent outwardly and inclined downwardly and outwardly as shown, with the bottom portion 4 of said flange provided with a plurality of apertures or a slot 16, as may be desired, to permit introduction of nails or screws into said nailer strip whereby the ceiling member 12 is secured to said structural member.

In the form shown in Figure 3, the structural member comprises symmetrically shaped complemental members 17 and 18 welded together at the top and bottom portion of the web, as shown at 19 and 20, and having a continuous opening 21 in the bottom flange portion 4. The upper flange portion forming the enlarged head portion is formed similarly to that shown and described in Figure 1, while the lower flange portion is formed similarly to that shown and described relative to Figure 2.

While I have shown and described specific embodiments of the present invention it will be understood that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention, as defined by the following claim.

I claim:

A nailer joist or stud comprising a web portion having a double thickness of material contacting each other and welded together, flanges extending from said web portion, the flanges at one end of said web portion bent outwardly from the vertical plane of said web and upwardly and angularly inward to provide an enlarged head portion, the flanges at the other end of the web extending outwardly from their vertical plane to form inner flange members and backwardly to form an outer flange member so that said flange members are in spaced superimposed relation to each other, and a nailer strip positioned within said enlarged head portion, said nailer strip provided with beveled corner portions, said angular inward portions of said enlarged head adapted to contact the beveled portions of said nailer strip so as to exert a wedge-like action on said nailer strip to hold the same securely in position with said enlarged head portion.

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