

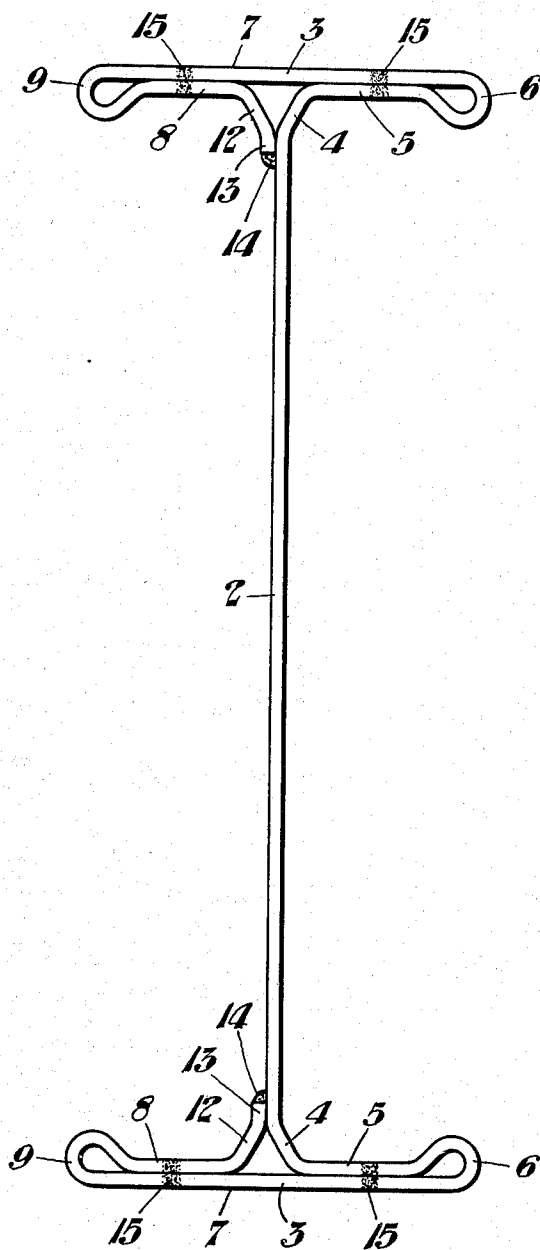
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STRUCTURAL SHAPE

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STRUCTURAL SHAPE

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1 Claim. (Cl. 189—37)

This invention relates to structural shapes such as metallic I-beams, channels, and the like, and more particularly to those which are made from rolled metal strip, or plates.

5 It is among the objects of the invention to provide a structural shape which is easy and economical to manufacture, extremely light in weight, and at the same time capable of supporting beams.

10 Another object is the provision of a structure of the class described which enables the transmission of a load resting on its top flange directly to the web, whereby transverse bending is eliminated.

15 The foregoing and further objects will be apparent after referring to the drawing, in which the single figure is an end elevation of the structural shape of the invention.

20 Referring more particularly to the drawing, the numeral 2 designates the web of an H or I-beam which is of single thickness of metal strip, or plate, and the numeral 3 generally designates the integral flanges thereof.

25 The flanges 3 are formed in part of a pair of short angular portions 4 which are bent at substantially 45° from the ends of the web 2 in the same direction. A substantially wider portion 5 extends at substantially 45° from each of the short angular portions 4. The strip is bent back upon each of the portions 5 in such manner as to form an inside connecting loop 6. The portion of the strip which is bent back upon each of the portions 5 is more than three times the width of the latter, as shown at 7. A portion 35 8 of the strip, which is substantially wider than the width of the portions 5, is bent from, and back upon, each of the portions 7, forming another inside connecting loop 9. The portions 8 of the strip being somewhat wider than the por-

tions 5 provide extended edges 12 which are bent at substantially 45° onto the side of the web 2 which is opposite that from which the short angular portions 4 are bent. The ends of the angular portions 12 are bent into parallelism with the web 2, as shown at 13. The extremities of the ends 13 of the angular portions 12 are welded to the web 2, as shown at 14, to provide a more rigid construction.

According to a preferred embodiment, the portions 5 and 8 of the flanges 3 are welded to the portions 7, as shown at 15.

Due to the construction of the flanges 3 and the manner in which they are related to the web 2, a load is transmitted directly to the latter.

15 While I have shown and described one specific embodiment of my 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 my invention, as defined by the following claim.

I claim:

A metallic beam formed from a single flat rolled section, said beam comprising a web portion and at least one flange portion, said web portion being composed substantially entirely of a single thickness of metal, said flange portion being composed of a double thickness of metal and provided with hollow edge portions, the web portion of said beam adjacent to said flange being composed of a double thickness of metal and forming with said flange a substantially V-shaped connecting portion, whereby said web portion will receive forces from said flange portion at points spaced from the center-line of said web portion, the legs of said substantially V-shaped connecting portion being welded together.

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