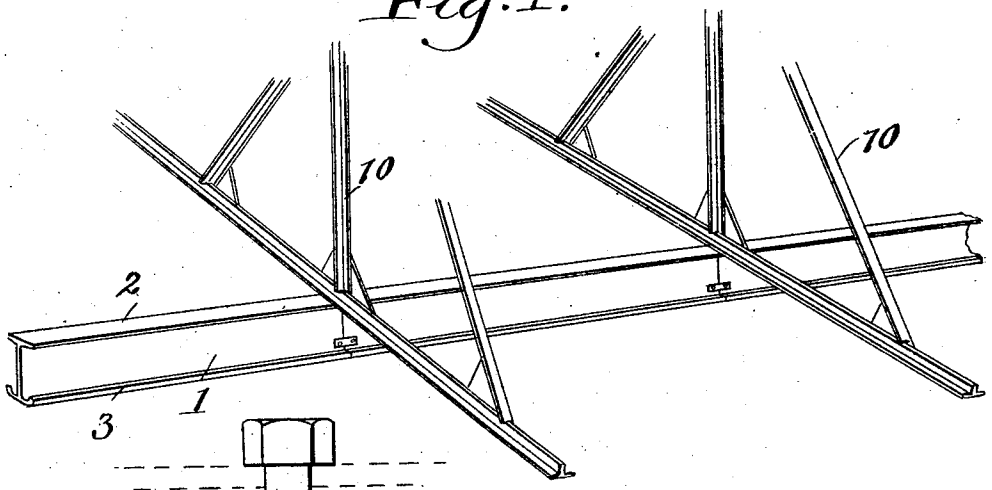
March 16, 1926. 1,577,162

E. T. BENNINGTON

I-BEAM MONORAIL

Filed July 6, 1925

Fig. 1.



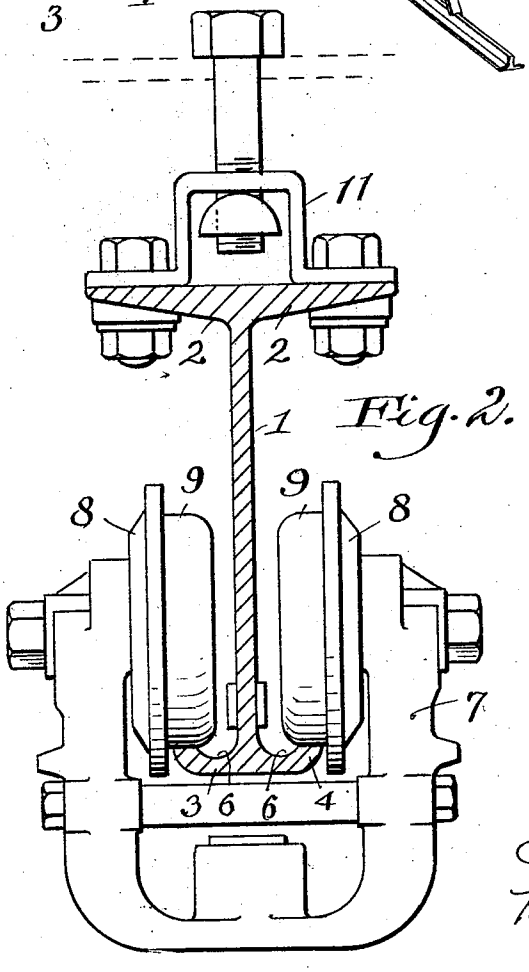


Fig. 2.

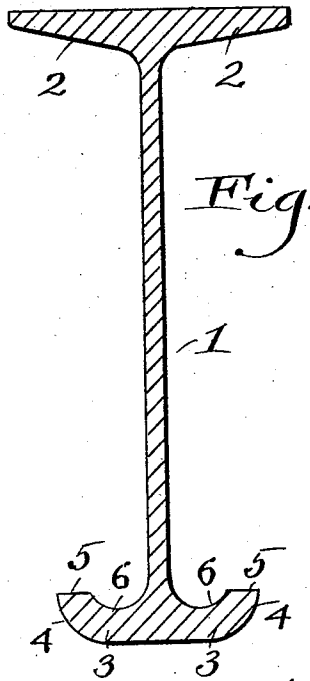


Fig. 3.

Inventor:
Earl T. Bennington
Rowe Hudson & Kent
attys.

Patented Mar. 16, 1926. 1,577,162

UNITED STATES PATENT OFFICE.

EARL T. BENNINGTON, OF CLEVELAND HEIGHTS, OHIO, ASSIGNOR TO THE CLEVELAND CRANE AND ENGINEERING COMPANY, OF WICKLIFFE, OHIO, A CORPORATION OF OHIO.

I-BEAM MONORAIL.

Application filed July 6, 1925. Serial No. 41,462.

To all whom it may concern:

Be it known that I, EARL T. BENNINGTON, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in I-Beam Monorails, of which the following is a full, clear, and exact description.

This invention relates to I-beam monorails adapted to serve not only as a track for overhead carriers, but also as structural members in a building or to bridge a wide span between supporting members.

The invention has for its object to provide a rolled I-beam monorail in which the carrier supporting flanges are so formed as to withstand, without bending, the peening action of carrier wheels passing over the same.

With the above and other objects in view, the invention may be said to comprise the I-beam monorail as illustrated in the accompanying drawings hereinafter described and particularly set forth in the appended claims together with such variations and modifications thereof, as will be apparent to one skilled in the art to which the invention appertains.

Reference should be had to the accompanying drawings, forming a part of this specification, in which Fig. 1 is a perspective view, showing an I-beam monorail embodying the invention, serving as an overhead carrier and as a structural member in a building; Fig. 2 is a transverse section through the I-beam monorail showing a carrier thereon; and Fig. 3 is a transverse section through the rolled I-beam.

Referring to the accompanying drawings, the I-beam monorail is a rolled shape having a web 1, upper flanges 2 and lower track flanges 3 which are shorter than the flanges 2. The flanges 3 are rolled with upturned edge portions 4 which have upper tread surfaces 5 in a plane at right angles to the web 1. While the lower flanges 3 are shorter than the upper flanges 2, they are preferably thicker, the cross-sectional area of the upper and lower flanges being substantially the same to give the section the strength necessary to enable it to be used as a beam extending between widely spaced supports. The tread surfaces 5 are raised above the inner portions of the flanges 3 to provide a shallow depression 6 between the upturned edge portion 4 and the web 1.

The shallow depressions 6 permit lateral flow of metal from the upturned portions 4 toward the web 1, without setting up bending stresses in the bodies of the flanges. The continual peening action of carrier wheels passing over the flanges, causes lateral flow of metal from the portion of the flanges over which the wheels roll and in the present construction, this metal can flow from the upturned portions 4 into the depression 6 without setting up any severe bending stresses in the flanges.

In Fig. 2 of the drawing, there is shown a carrier 7 having wheels 8 which travel along the supporting flanges 3, the rails 8 being provided with cylindrical tread portions 9 which roll along the tread surfaces 5.

As above stated, the I-beam monorail may be employed as a structural member in a building and in Fig. 1, I have shown the I-beam monorail acting as a supporting girder for roof trusses 10. The I-beam monorail may be flexibly suspended and I have shown, in Fig. 2, a flexible hanger 11 for supporting the monorail.

Having thus described my invention, I claim:

1. A rolled I-beam monorail having lower flanges the edge portions of which are bent upwardly and formed to provide flat tread surfaces for carrier wheels, there being shallow depressions along the tops of the flanges between the tread surfaces and the web into which metal may be forced by the peening action of carrier wheels.

2. A rolled I-beam monorail having lower flanges shorter than the upper flanges, the lower flanges having their edge portions bent upwardly and formed to provide flat tread surfaces for carrier wheels, there being shallow depressions along the tops of the flanges between the tread surfaces and the web into which metal may be forced by the peening action of carrier wheels.

3. A rolled I-beam monorail having lower flanges shorter than the upper flanges, the lower flanges being shorter and thicker than the upper flanges and having flat tread sur-

faces on the upper sides thereof along their outer edges, said tread surfaces being at right angles to the web of the I-beam, and said lower flanges having shallow depressions extending along the inner sides of said tread surfaces whereby the metal of the tread surfaces may be displaced laterally by the peening action of the carrier wheels without setting up excessive bending stresses in the said lower flanges.

In testimony whereof, I hereunto affix my signature.

EARL T. BENNINGTON.