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P. T. HANDIGES.

BRAKE BEAM.

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NO MODEL.

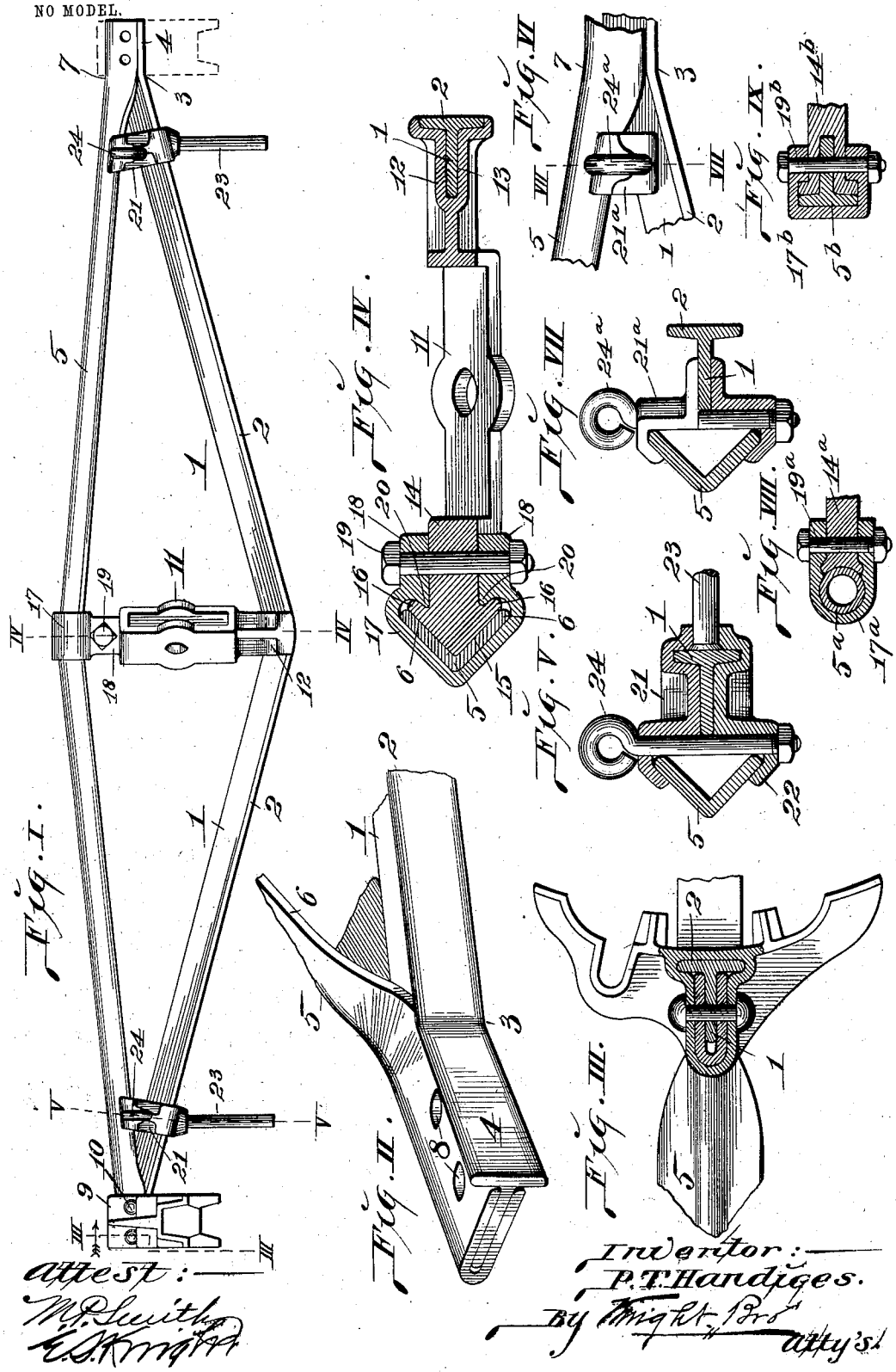


Fig. I.

Fig. II.

Fig. III.

Fig. IV.

Fig. V.

Fig. VI.

Fig. VII.

Fig. VIII.

Fig. IX.

Attest:—
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No. 733,839. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

PHILIP T. HANDIGES, OF EAST ST. LOUIS, ILLINOIS, ASSIGNOR OF ONE-HALF TO DAMASCUS BRAKE BEAM COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 733,839, dated July 14, 1903.

Application filed March 28, 1903. Serial No. 149,984. (No model.)

To all whom it may concern:

Be it known that I, PHILIP T. HANDIGES, a citizen of the United States, residing in East St. Louis, in the county of St. Clair and State of Illinois, have invented certain new and useful Improvements in Brake-Beams, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a brake-beam for railway-cars, the object of the invention being to produce a beam of light weight, but of pronounced strength, and one having a detachable strut that may be readily and quickly applied to or removed from the tension and compression members of the beam.

The invention consists in features of novelty hereinfter fully described, and pointed out in the claims.

Figure I is a top view of my brake-beam. Fig. II is a perspective view showing the assembled ends of the tension and compression members of the beam. Fig. III is a transverse section taken on line III III, Fig. I, through one end of the beam and the brake-head thereon. Fig. IV is a transverse section taken on line IV IV, Fig. I, through the tension and compression members and the strut positioned between them. Fig. V is a transverse section taken on line V V, Fig. I, through the beam and one of the finger-guard and hanger clips. Fig. VI is a top view of a fragment of the beam, showing a hanger of modified form. Fig. VII is a transverse section taken on line VII VII, Fig. VI. Figs. VIII and IX are sections illustrating modifications of the compression member of the beam and the ends of the strut connected thereto.

1 designates the tension member of my beam, which is of T form in cross-section and has the head-flanges 2 located outermost. Near each end this tension member is bent at 3 to form arms 4, extending at right angles to the bowed central portion of the member, as seen in Figs. I and II.

5 designates the compression member of the beam, which is preferably of V shape in cross-section, positioned so that the wings 6 of the V project inwardly toward the tension member, as seen most clearly in Figs. II and IV. The central portion of the compression member is bowed, as seen in Fig. I, and near its ends the member is bent at 7 to extend in planes corresponding to the arms 4 of the tension member, and the wings 6 of the compression member are flattened onto the web of the tension member throughout the extent of its arms 4, as seen in Figs. I, II, and III, so as to embrace said web.

8 designates bolt or rivet holes extending through the flattened ends of the compression member and the portions of the web of the tension member embraced by the ends of the compression member.

9 designates brake-heads secured to the ends of the beam by bolts or rivets 10, that pass through the brake-head and through the holes 8 in the tension and compression members.

By the construction described I render the ends of the beam of a form in which the brake-heads are readily and securely fitted to the ends of the beam, thereby securing a firm attachment of the heads to the beam members and at the same time retaining the advantages of the light yet strong forms of tension and compression members embodied in the beam.

11 designates the detachable strut positioned centrally between the tension and compression members of the beam and through which the brake-lever passes in the usual manner. This strut has a tail 12, containing a socket 13, corresponding to the shape of the tension member, so as to embrace the web and flanges of said member to which it is fitted, as seen in Fig. IV.

14 is the head of the strut 11, which is of arrow-point form, thus presenting tapering faces 15, which rest against the wings 6 of the compression member to seat firmly within the compression member at a central location, as seen in Fig. IV.

16 designates the rearwardly and outwardly projecting lips of the arrow-point head 14.

17 is a clip of socket form, that incloses and embraces the compression member and is provided with rearwardly-extending arms 18,

that embrace the body of the arrow-point strut-head 14, to which they are secured by a bolt 19, extending therethrough. Each of the clip-arms 18 is provided with a tongue 20, that is seated at the rear of the lips 16 of the arrow-point head 14.

In applying the strut 11 between the tension and compression members of the brake-beam the strut is first introduced between said members, so that its tail will embrace the tension member, as stated, and the tapering faces 15 of the strut will seat within the compression member. The clip 17 is then slipped onto the compression member by passing one of its arms first under one of the wings of said member and then swinging it laterally with respect to the member, so that the other arm may be passed over the second wing. The clip is then slipped onto the head of the strut, and the tongues 20 carried by its arms engage in the rear of the lips 16, carried by said head, after which the bolt 19 is passed through the parts, thereby holding them firmly together. It will be understood that the parts may be readily separated by reversing the actions incident to connecting them.

21 designates hanger-clips fitted over the tension member of the brake-beam and having arms 22, that embrace the wings of the compression member. (See Figs. I and V.) The clips 21 carry guard-fingers 23 for limiting the swing of the brake-beam by striking against the car-wheels, and passing through each clip is a hanger-eyebolt 24 to receive a hanger-chain, by which the brake-beam is suspended.

In Figs. VI and VII, I have shown a modification of the hanger-clips in which the clips 21^a are positioned between the tension and compression members and equipped with eyebolts 24^a, but in which the guard-fingers are dispensed with.

In Fig. VIII, I have shown a modification of the compression member and of the strut applied thereto and a strut-clip that embraces said member. In this construction the compression member 5^a is of tubular form and the strut-clip 17^a is shaped to correspond to the contour of the compression member, as is also the head 14 of the strut. The arms of the clip embrace the head of the strut and are connected thereto by the bolt 19^a. In Fig. IX the compression member 5^b is shown as of T form and the strut-clip and head 17^b and 14^b are shaped to correspond to the shape of the compression member and secured by the bolt 19^b. It will be seen that in either of these modifications the strut may be readily applied to and disconnected from the compression member in the same manner as that set forth in connection with the connection between the strut and compression member hereinbefore described.

I claim as my invention—

1. In a brake-beam, the combination of a tension member of T shape in cross-section, and a compression member having its ends flattened onto the web of said tension member, substantially as set forth.

2. In a brake-beam, the combination of a tension member of T shape in cross-section, and a compression member of V shape in cross-section, said compression member having the wings thereof at its ends flattened onto the web of said tension member, substantially as set forth.

3. In a brake-beam, the combination of a tension member and a compression member, a strut seated between said tension and compression members, and a detachable clip fitted to said compression member and having rearwardly-extending arms secured to said strut, substantially as set forth.

4. In a brake-beam, the combination of a tension member, a compression member, a strut fitted to said tension member and having an arrow-shaped head fitted to said compression member, and a clip embracing said compression member and having arms fitted to said arrow-shaped head, substantially as set forth.

5. In a brake-beam, the combination of a tension member, a compression member of V shape in cross-section, a strut fitted to said tension member and having an arrow-shaped head fitted within the wings of said compression member, a clip fitted to said compression member and having rearwardly-extending arms provided with tongues, lips carried by said strut-head engaged by said clip-tongues, and means for securing said clip to said strut-head, substantially as set forth.

6. In a brake-beam, the combination of a T-shaped tension member, a V-shaped compression member, hanger-clips fitted to the web of said T-shaped tension member, and embracing said compression member, and an eyebolt passing through said clip, substantially as set forth.

7. In a brake-beam, the combination of a T-shaped tension member, a V-shaped compression member, hanger-clips fitted to the web of said T-shaped tension member and embracing said compression member, an eyebolt passing through said clip, and a guard-finger carried by said hanger-clip, substantially as set forth.

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In presence of—
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