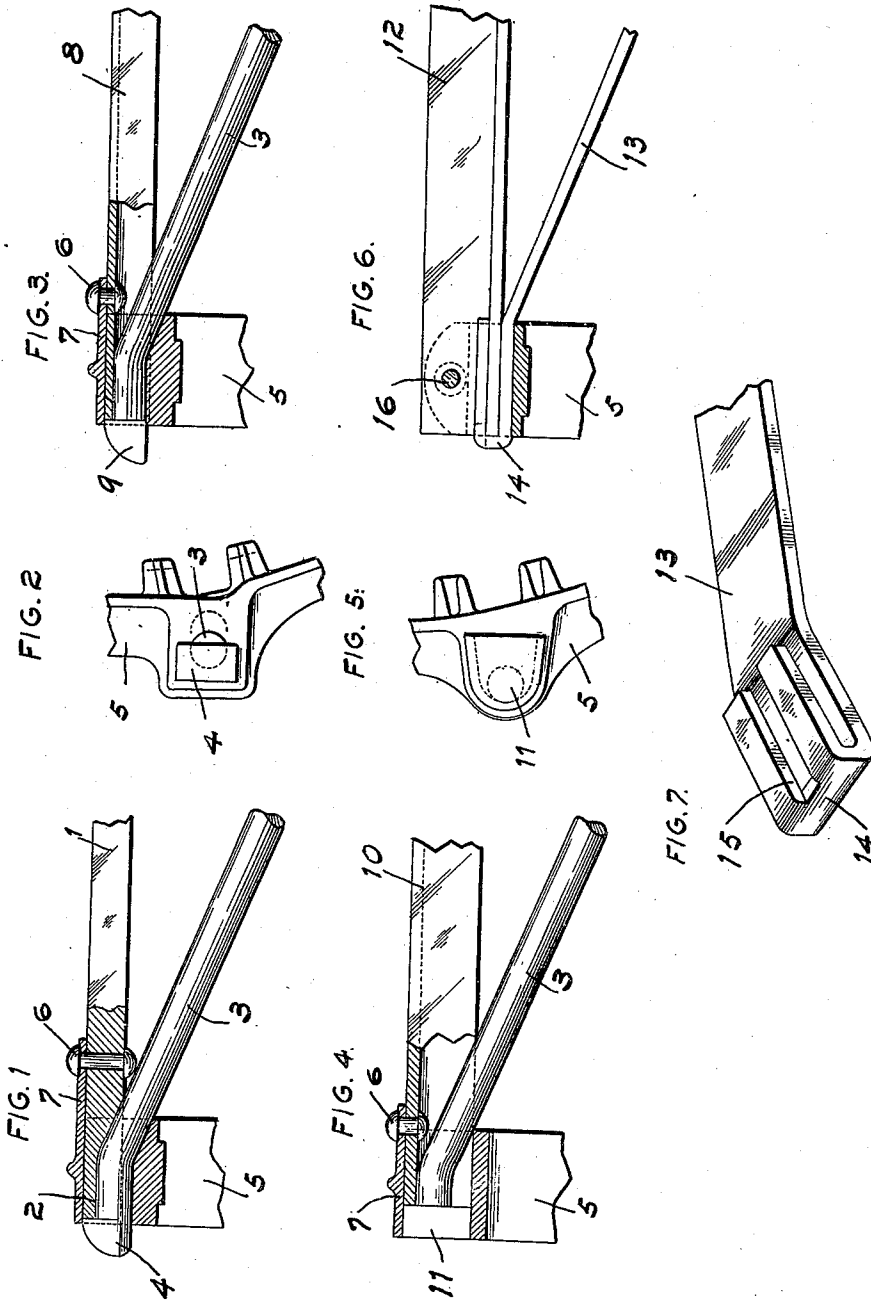


C. H. WILLIAMS, JR.
BRAKE BEAM.
APPLICATION FILED JULY 19, 1909.

990,938.

Patented May 2, 1911.



WITNESSES

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BRAKE-BEAM.

990,938.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed July 19, 1909. Serial No. 508,456.

To all whom it may concern:

Be it known that I, CHARLES H. WILLIAMS, Jr., a citizen of the United States, residing at Chicago, Illinois, have invented a certain new and useful Improvement in Brake-Beams, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of one end of a brake beam of my improved construction, with parts thereof in section. Fig. 2 is an end view of the form of beam shown in Fig. 1. Fig. 3 is an elevation of the end of a modified form of the beam with parts thereof in section. Fig. 4 is an elevation of the end of a modified form of the beam with parts thereof in section. Fig. 5 is an end view of the form shown in Fig. 4. Fig. 6 is an elevation of the end of a further modified form of the beam with parts thereof in section. Fig. 7 is a perspective view of the end of the tension member made use of in the form of beam shown in Fig. 6.

My invention relates generally to trussed brake beams, and more particularly to the means for uniting the ends of the compression and tension members of a trussed beam.

The principal objects of my invention are to construct a simple, inexpensive beam which may be readily assembled or taken apart, maintains its rigidity while in action or under load, and cannot be taken apart until the brake heads are removed. Brake beams of trussed construction are obviously stronger for a given weight of material than are the so-called solid I or deck section beams, but their superiority in strength, weight, durability and economy of repairs, is frequently questioned, for the reason that composite or built-up trussed beams tend to work loose at the different joints and to develop lost motion, and the prevailing types of so-called solid beams cannot be repaired satisfactorily with any degree of economy.

I propose to provide a beam wherein the defects above referred to are overcome, and which beam is easily assembled or taken apart for the purpose of repair, and in which beam a broken tension member or truss rod can be easily replaced, thereby preventing the discarding of the entire beam structure in case the tension member or truss rod is broken or becomes inoperative.

A further object of my invention is to construct a brake beam wherein the compression member is in the form of a solid bar, a channel T or U-shape, or other well known commercial shape, and the tension member being an ordinary rod, round or square in cross section, or in the form of a strap, the ends of said tension member being upset to form heads, or bent into such shape as that they will engage directly against the ends of the compression member. Such construction does away with the necessity of fastening the ends of the tension and compression members together by means of bolts or rivets, and readily permits the brake shoes to be snugly fitted on to the conjoined ends of the compression and tension members.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described and claimed.

In the construction of the form of beam shown in Figs. 1 and 2, 1 designates the compression member, which is preferably in the form of a solid bar rectangular in cross section. Grooves or recesses 2 are formed in the ends of said bar, which grooves or recesses receive the ends of the tension member 3, the same being formed of a solid rod, either round or square in cross section, with its ends upset to form heads 4, which, when the parts of the beam are assembled, bear directly against the ends of the compression member 1.

5 designates the brake head which embraces the joined ends of the compression and tension members 1 and 3, thus rigidly maintaining the ends of the tension member

3 in the grooves or recesses 2, and the heads are rigidly fixed on the ends of the beam by means of rivets 6, or like fastening devices, which pass through ears 7 on said heads and through the compression member.

In the construction shown in Fig. 3, the compression member is in the form of a channel 8, and the ends of the tension member are provided with extra wide heads 9 which bear against the ends of the web and flanges forming the channel.

In the modified construction shown in Figs. 4 and 5, the compression member is in the form of a channel 10, which is U-shape in cross section, and the ends of the tension member in this form of beam are provided with extra large heads 11 which correspond in shape to the cross sectional outline of the compression member.

In the modified construction shown in Figs. 6 and 7, the compression member is formed of a commercially rolled T-bar or beam 12, and the tension member 13 is in the form of a flat bar or strap. The ends of the tension member are bent, as designated by 14, so as to engage both flanges of the T-bar, and said bent ends are slotted, as designated by 15 in order to accommodate the web of the T-bar. In this construction the brake heads are fitted on to the conjoined ends of the compression and tension members, said heads being fixed in position by means of rivets 16 which pass through the rear portions of said heads and through the web of the T-bar.

Thus it will be seen that I have provided a trussed brake beam utilizing only well known commercial shapes, such as solid bars, channels and T-bars, which beam is constructed without the use of thrust blocks or their equivalent, inasmuch as the ends of the tension member are so formed as to bear directly against the ends of the compression member, and the beam cannot be loosened or dismantled until the brake heads are removed. This design of beam permits the use of very shallow heads, which is quite important in beams utilized on trucks with short wheel bases. My improved form of beam can be easily and quickly taken apart and assembled in case of repair, and there are no nuts, bolts, or cotter pins to work loose, in which event the parts of the beam structure are loosened, thereby rendering the beam unfit for service.

It will be readily understood that minor changes can be made in the construction and form of my improved brake beam, without departing from the spirit of my invention.

I claim:

1. In a trussed brake beam, a compression member and a tension member, the ends of which latter are enlarged and bear directly against the outer ends of the compression

member, brake heads fitted upon and over the abutting edges of the compression and tension members, and fastening devices rigidly fixing the brake heads to the compression member.

2. In a trussed brake beam, a compression member and a tension member, the ends of which latter are upset to form shoulders which bear directly against the outer ends of the compression member, brake heads fitted upon and over the abutting edges of the compression and tension members, and fastening devices rigidly fixing the brake heads to the compression member.

3. In a trussed brake beam, a tension member comprising a solid rod, the ends of which are provided with abrupt laterally extending shoulders which bear directly against the outer ends of the compression member of the beam, and brake heads seated upon and over the abutting edges of the compression and tension members, which brake heads are fixed to the compression member.

4. In a trussed brake beam, a tension member comprising a solid rod, the ends of which are upset to form abrupt laterally extending shoulders which bear directly against the outer ends of the compression member of the beam, and brake heads seated upon and over the abutting edges of the compression and tension members, which brake heads are fixed to the compression member.

5. In a trussed brake beam, a tension member comprising a solid rod, the ends of which are provided with integral enlarged heads which bear directly against the outer ends of the compression member of the beam, and brake heads seated upon and over the abutting edges of the compression and tension members, which brake heads are fixed to the compression member.

6. In a trussed brake beam, the combination with a trussed compression member having grooves formed in its ends, of a tension member, the ends of which are seated in said grooves, there being abrupt shoulders formed on the end of the tension member which bear directly against the ends of the compression member, and brake heads seated upon and over the abutting edges of the compression and tension members, which brake heads are fixed to the compression member.

7. In a trussed brake beam, the combination with a channel-shape compression member, of a tension member, the ends of which occupy the ends of the channel-shape compression member, heads integral with the ends of the tension member, which heads extend laterally and bear directly against the outer ends of the flanges of the compression member, and brake heads seated upon and over the abutting edges of the compression

and tension members, which brake heads are fixed to the compression member.

8. In a trussed brake beam, a compression member, and a tension member, the ends of which latter have lateral shoulders which
5 bear directly against the outer ends of the flanges of the compression member, brake heads fitted upon and over the abutting edges of the compression and tension mem-

bers, and a rivet fixing each brake head to 10 the compression member.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 2nd day of July 1909.

CHARLES H. WILLIAMS, JR.

Witnesses:

EDWARD T. WALKER,
JOSEPH W. WEINLAND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
