Sept. 11, 1956 R. B. COTTRELL 2,762,467

BRAKE BEAM

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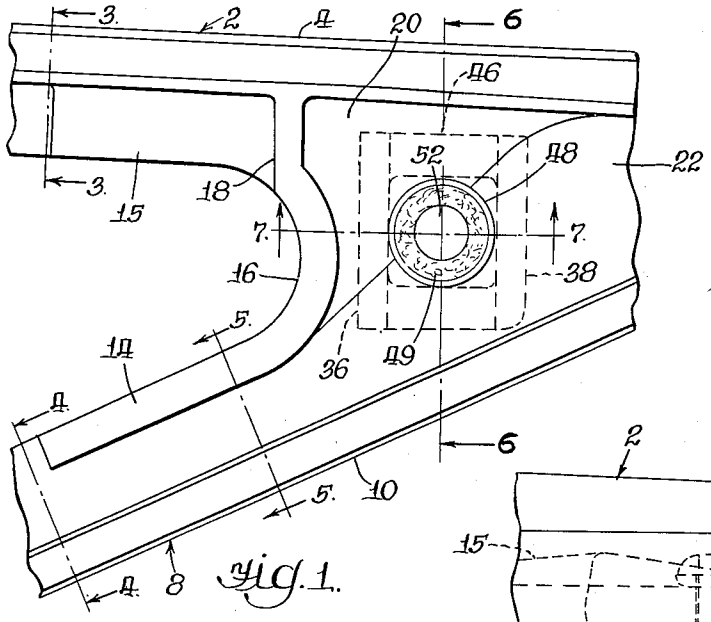

Fig. 1.

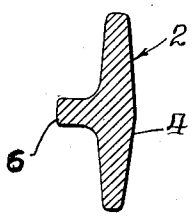

Fig. 3.

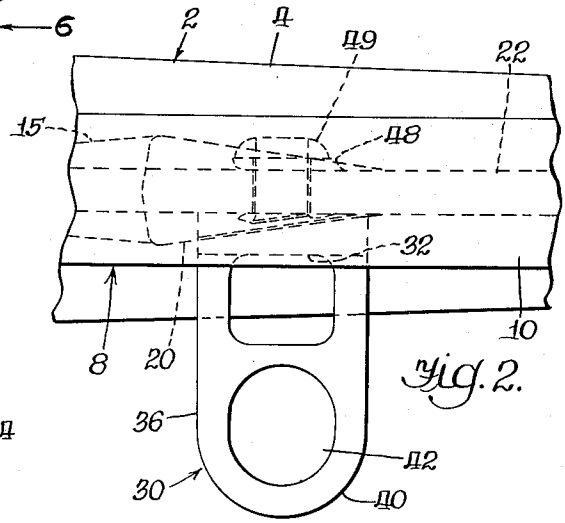

Fig. 2.

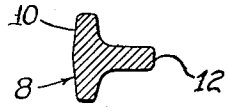

Fig. 4.

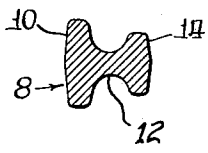

Fig. 5.

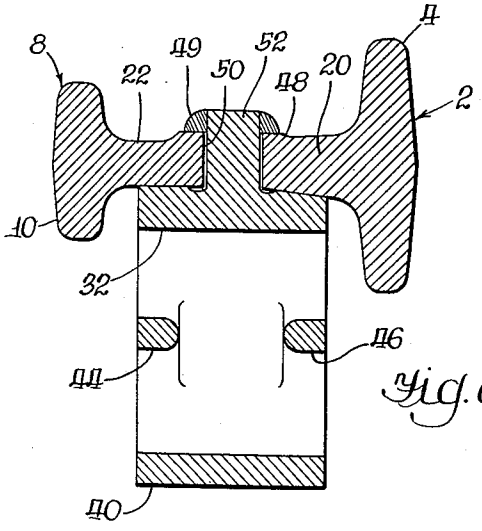

Fig. 6.

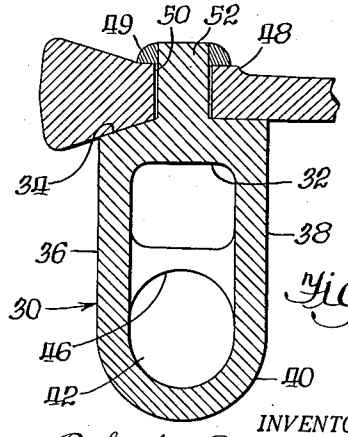

Fig. 7.

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2,762,467

BRAKE BEAM

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2 Claims. (Cl. 188—226.1)

The invention relates to a truss type railway brake beam and more particularly to a cast beam comprising a novel safety support.

A primary object of the invention is to design a brake beam in the form of a casting of simple construction and adapted for inexpensive connection to a safety support member.

A further object of the invention is to devise an arrangement in which a rigid connection is provided between the beam and associated safety support.

A more specific object of the invention is to provide a safety support having a lug thereon for simple welded connection to the associated brake beam.

The foregoing and other objects and advantages of the invention will become apparent from a consideration of the specification and the associated drawings, wherein:

Figure 1 is a fragmentary top plan view of a brake beam structure embodying the invention, only one end of the beam being illustrated, inasmuch as it is symmetrical about its transverse center line;

Figure 2 is a fragmentary front elevational view of the structure shown in Figure 1, and

Figures 3 to 7, inclusive, are sectional views on lines 3—3, 4—4, 5—5, 6—6 and 7—7, respectively, of Figure 1.

Describing the invention in detail and referring to the drawings, wherein a preferred embodiment of said invention is illustrated, the brake beam casting is preferably formed of steel and comprises a compression member generally designated 2. This member is preferably of T-section having a rear substantially vertical web 4 defining the head of the T and having a forward substantially horizontal web 6 defining the leg of the T. The novel beam casting also comprises a T-section tension member generally designated 8, having a forward substantially vertical web 10 defining the head of the T and having a rear substantially horizontal web 12 defining the leg of the T. It may be noted that the tension and compression members 2 and 8 are interconnected centrally thereof in the usual manner by a strut or fulcrum (not shown) affording conventional connecting means for an associated brake lever (not shown). The tension member 8, at its outward end, also comprises a rear substantially vertical web 14 defining with the webs 10 and 12 an H-section, as seen in Figure 5. The web 12 forms the cross bar of the H. The tension member web 14 comprises an arcuate segment 16 at its outboard end merging with the outboard end of the compression member web 6 which flares in thickness toward its outboard end, or in other words, tapers in thickness as at 15 from its juncture with the arcuate segment 16 of the tension member web 14.

The arcuate segment 16 of the web 14 is also connected to a substantially linear segment 18, which merges at the forward edge of the compression member web 4 and is connected to the outboard end of the tapering segment 15 of the compression member web 6.

Outboardly of the web segments 16 and 18, the compression member web 4 and said segments are connected to an outwardly tapering segment 20 of a substantially horizontal web 22, which merges with and flares in width from the outboard end of the tension member web 12, as best seen in Figure 1, said web 22 connecting the vertical webs 4 and 10 outwardly of the tension and compression members. As well known to those skilled in the art, a brake head structure (not shown) may be integrally formed on the end of the beam by merging with the web 22 and the vertical webs 4 and 10 of the compression and tension members, respectively. The brake head is preferably of conventional design and may be provided with a socket (not shown) for reception of the usual pivotal hanger (not shown).

Secured to the underside of the beam casting, a safety support member 30, which is preferably formed as an iron or steel casting and comprises the top web or wall 32 tapered as at 34 for complementary flat face engagement with the lower surface of the web 22 and its tapered segment 20. The member 30 also comprises spaced side walls 36 and 38 extending transversely of the beam and connecting the top wall 32 to an arcuate bottom web or wall 40 defining the lower margin of an eye or aperture 42, which receives an associated conventional safety support device (not shown). The aperture 42 extends between the side walls 36 and 38 of the casting, which in turn are provided with spaced interconnecting ribs 44 and 46 defining the upper margin of the aperture 42.

The upper surface of the beam web 22 and the tapered segment 20 are provided with the flat annular boss 48 around an opening 50 which extends vertically through the web 22 and is adapted to complementally receive the lug or retainer 52, which is formed on the upper surface of the top web 32.

During assembly, the safety support member 30 is positioned firmly against the underside of the web 22 and its tapered segment 20 with the lug 50 disposed within and extending upwardly through the opening 50.

The extended lug 50 is then circumferentially welded as at 49 to the brake beam in the area of the flat annular boss 48 of the web 22.

It will be understood that the member 30 may be removed from the beam by the simple expedient of chipping away at weld 49.

It will also be noted that the complementary flat face engagement 34 combines with weld 49 to assure a rigid connection between the member 30 and the brake beam, thereby preventing undesirable noise due to rattling in service. Rigid connection also restrains rotation between member 30 about the vertical axis of the lug 50.

I claim:

1. In combination, a brake beam consisting of a tension member, a compression member, a web extending therebetween, a circular opening extending through the web, a boss on the upper side of said web surrounding said opening, a support member depending from the lower side of the beam and substantially perpendicular thereto, a lug on the support member complementally received by the opening, a fused metallic connection between the lug and the boss at the upper side of said web, an area of horizontal planed engagement between the support and the web, and another area of planed engagement between the support and the web angularly related to said first mentioned area.

2. The combination of claim 1, wherein the support member comprises spaced parallel walls depending from the web and extending transversely of the beam, an arcuate web interconnecting the lower extremities of the walls, and other webs interconnecting the walls and defining with the walls and the arcuate web, an aperture operative to receive an associated supporting device.

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