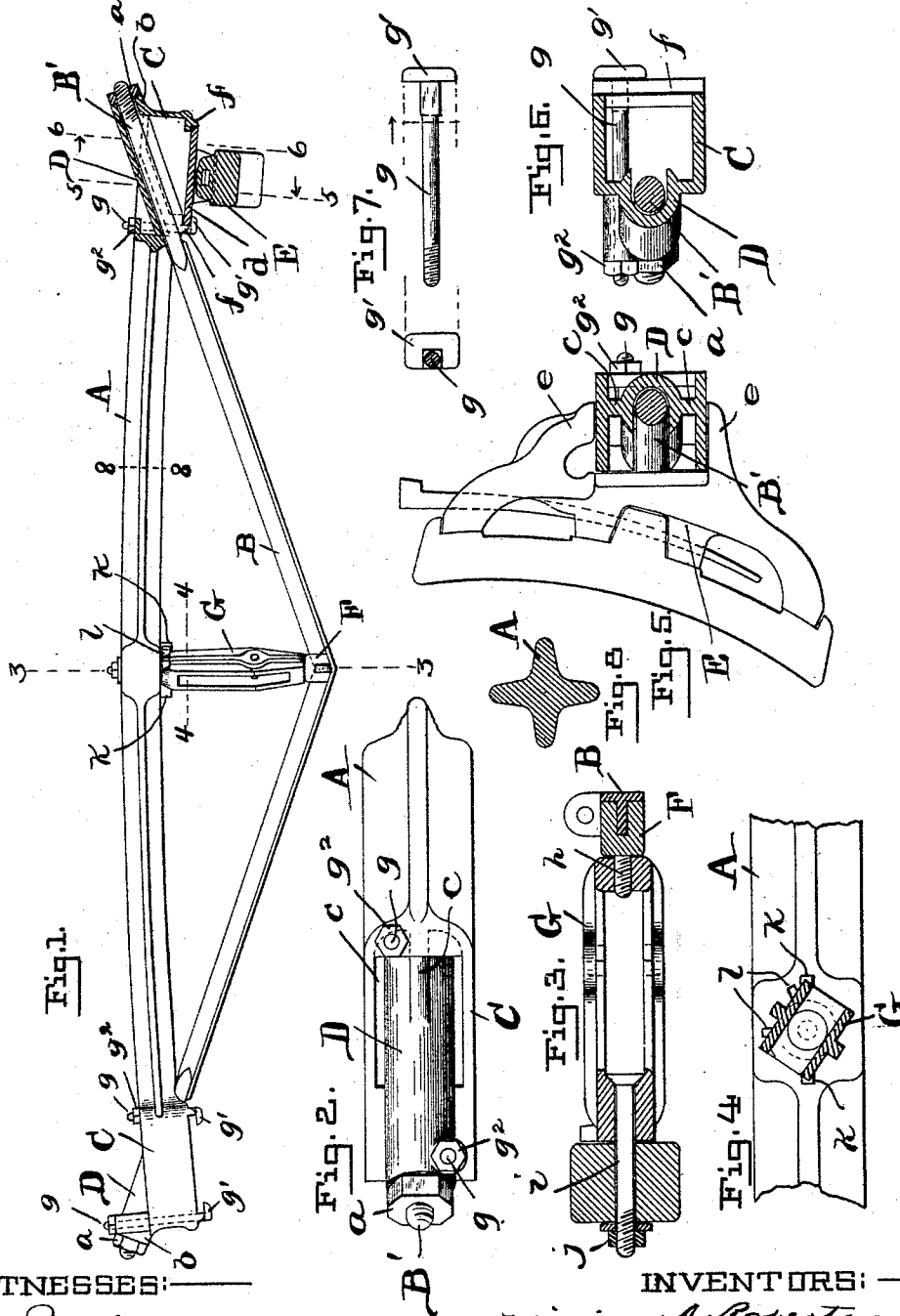


(No Model.)

W. A. ROBERTSON & H. CARLTON.
BRAKE BEAM.

No. 497,728.

Patented May 16, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM A. ROBERTSON AND HOWARD CARLTON, OF BALTIMORE, MARYLAND, ASSIGNORS TO THE CHICAGO RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 497,728, dated May 16, 1893.

Application filed December 5, 1892. Serial No. 454,180. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM A. ROBERTSON and HOWARD CARLTON, citizens of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Brake-Beams for Railway-Cars, of which the following is a specification.

This invention relates to an improvement in trussed metallic brake beams for railway cars, and is illustrated in the accompanying drawings, in which—

Figure 1 shows a top view of the brake-beam with one end in section. Fig. 2 shows a detail back view of one end of the brake-beam. Fig. 3 shows a central cross-section on line 3—3 of Fig. 1; Fig. 4, a section on line 4—4 of Fig. 1; Fig. 5, an enlarged detail side-view of brake-shoe and head with beam in section taken on line 5—5— of Fig. 1; Fig. 6, a section on line 6—6 of Fig. 1. Fig. 7 shows detail view of bolt and nut for securing brake-shoe to brake-beam. Fig. 8 shows a cross-section of the main member of the beam taken on line 8—8 of Fig. 1.

In the drawings, the letter, A, designates the main member of the beam, which is cross-shaped in transverse section see Fig. 8, and has a slight curvature from end to end to stiffen it under action.

The letter, B, designates the angle truss-rod which is T-shaped in cross-section and has round end-portions, B', with screw-threaded extremities. Square boxes, C, are formed integral with the main member, A, at each end of the same and each box comprises an elongated semi-tubular socket, D, which extends diagonally of the box and receives one of the rounded ends of the truss-rod, the front side of the socket being open. The said socket has a tubular outer end, b, which projects from the rear outer corner of the box, and has an end-surface against which a nut, a, on the threaded extremity of said truss-rod is screwed. This socket is supported and strengthened by webs, c, on the top, bottom and back sides. The box has a closed outer end but its front side and a portion of its inner end are open to facilitate the introduction of the rounded end of the truss-rod into the socket.

The brake-shoe head, E, has a base-flange, d, which fits against the front of the box between flanges, f, thereon and is also provided with lips, e, which take over the top and bottom of the box. The brake-shoe head is secured to the box by bolts, g, which have heads, g', taking over the front side of the base-flange, d, and extend through the box to the rear side of the beam where nuts, g², are screwed upon them. These two securing bolts are placed diagonally of the box,—one at the inner end of the box and on the upper side of the truss-rod, and the other at the outer end of the box and on the under side of said rod.

A block, F, is fitted in the angle at the middle of the truss-rod and straddles the center inside web of said truss-rod; this block has a threaded stud, h, and the king-post or strut, G, which is slotted as usual to receive the brake-lever, has a threaded hole in its end-bar which receives the said stud, h. The opposite end of the king-post fits against the inner side of the main member, A, which is made solid at this part and a bolt, i, extends through the end of the king-post and through said solid part of the main member and has a nut, j, on its end behind the said main member. With this construction the king-post is reversible, i. e., it may be turned from one inclined position to the opposite position to receive the brake-lever from either side of the car. The nut, j, is tightened up to set the strut firmly, and locked, and said strut may be reversed by inserting the brake-lever through its slot, and then turning it over, the strut turning on the bolt, i, and not affecting it. Hence the bolt does not turn but remains tight. Thus the strut may be reversed without loosening any of the parts.

The king-post or strut fits between two diametrically-opposite stops, k, projecting from the front side of the main member, A, and is itself provided with a pair of stop-lugs, l, on the upper side, to engage said stops, k, in the two positions of the strut and prevent further movement of the latter on its pivots.

The strain on this improved brake-beam will be equally distributed throughout its parts. By forming the end-boxes integral with the main member of the beam, the con-

struction is greatly simplified and cheapened. Moreover the pressure of the nuts on the ends of the truss-rod is directly against the end-surfaces of the main member, which insures strength and stability.

The construction at the ends of the beam enables brake-shoe heads to be applied which are constructed to receive different forms of brake-shoes.

10 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a trussed metallic brake-beam, the combination of a main member having integral boxes at each end each box comprising a socket which extends diagonally from the front to the rear side of the box; said boxes provided with vertical flanges *f*, a truss-rod having end-portions which engage through said sockets and have nuts on their ends bearing against the end-surfaces of the boxes and brake-shoe heads fitted to the boxes, between said vertical flanges.

2. In a trussed metallic brake-beam, the combination of a main member having integral boxes at each end each box comprising a socket which extends diagonally from the front to the rear side of the box; a truss-rod having end-portions which engage through said sockets and have nuts on their ends bearing against the end-surfaces of the boxes; brake-shoe heads having base-flanges which fit against the front sides of the boxes; and bolts extending through the boxes and having heads which take over the flanges of the brake-shoe heads.

3. In a trussed metallic brake-beam, the combination of a main member having stop-lugs at the middle part; an angle truss-rod suitably connected at the ends with the said main member; a king-post or strut between the main member and truss-rod at the middle of the beam and mounted at one end on a stud projecting from the truss-rod and fitting against the front side of the main member at the other end and provided with lugs to stop against those of the said main member; and a bolt extending through the end of the strut and through the said main member and having a nut on its end behind the main member.

4. In a trussed metallic brake-beam, the combination of a main member having boxes at its ends; an angle truss-rod which is T-shaped in cross-section and has rounded ends fitting through the boxes of the main member and secured by nuts bearing against the ends of the main member; a block fitting the angle of the truss-rod and straddling the central web of the T-rod and having a stud; a king-post or strut with a hole to fit the stud and abutting the main member at the opposite end; a bolt and nut connecting said strut with said main member; and suitable stops to limit the movement of the strut.

In testimony whereof we affix our signatures in the presence of two witnesses:

WILLIAM A. ROBERTSON.
HOWARD CARLTON.

Witnesses:

JNO. T. MADDOX,
F. H. ABBES.