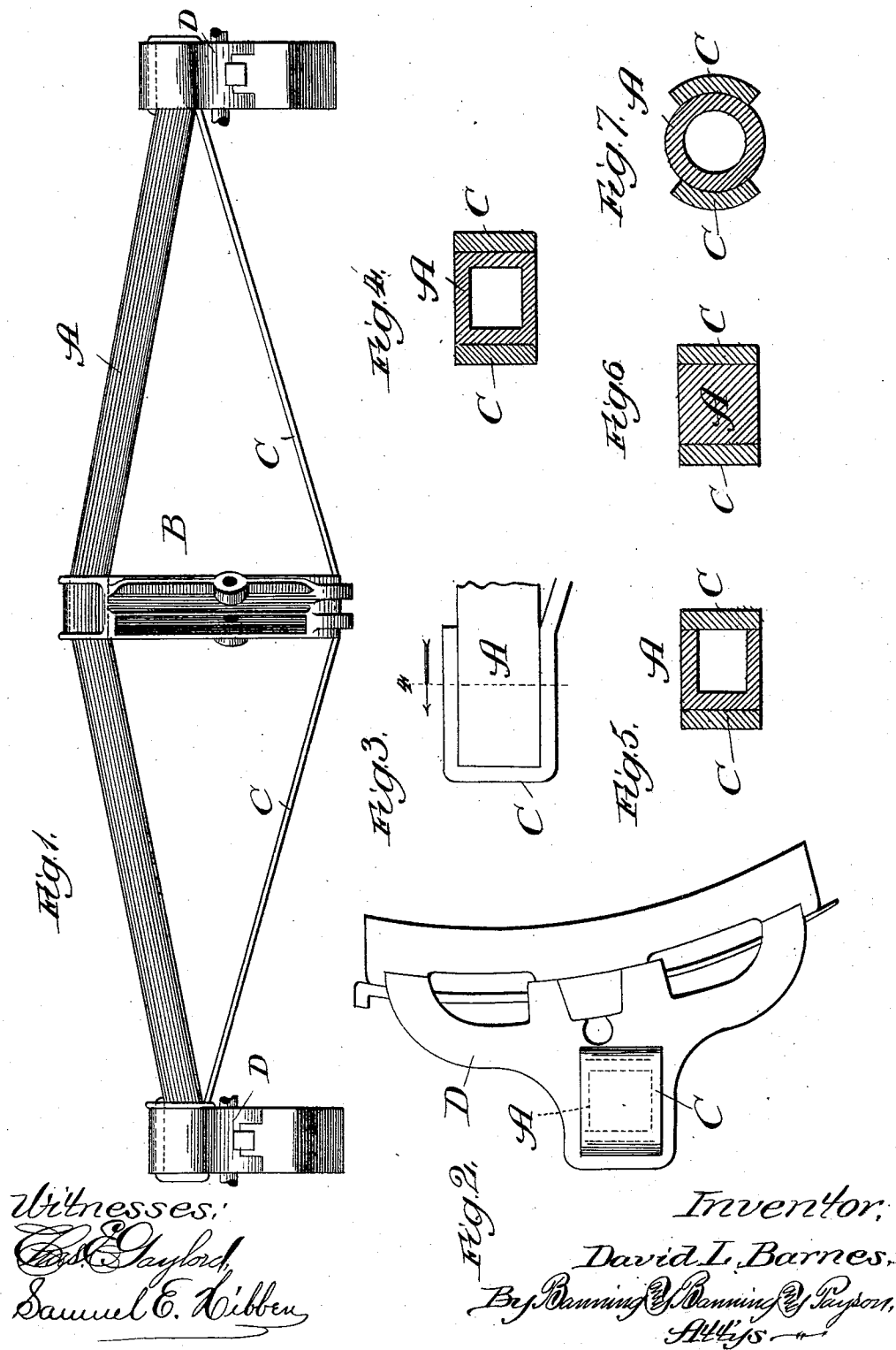


(No Model.)

D. L. BARNES.
CAR BRAKE.

No. 477,922.

Patented June 28, 1892.



UNITED STATES PATENT OFFICE.

DAVID L. BARNES, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE NORTHWESTERN EQUIPMENT COMPANY, OF SAME PLACE.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 477,922, dated June 28, 1892.

Application filed February 15, 1892. Serial No. 421,605. (No model.)

To all whom it may concern:

Be it known that I, DAVID L. BARNES, a citizen of the United States, residing in Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Car-Brakes, of which the following is a specification.

My invention relates more especially to the construction of the brake-beam, and its object is to provide a simple and efficient method of securing the truss rod or strap to the compression member; and the invention consists in the method and details of construction hereinafter pointed out in the claims.

In the drawings, Figure 1 is a plan view of a brake-beam constructed in accordance with my invention; Fig. 2, an end view of the brake head and shoe shown at the left-hand end of Fig. 1; Fig. 3, a plan view of the left-hand end of the brake-beam with the truss rod or strap, the brake head and shoe having been removed; Fig. 4, a section on line 4 of Fig. 3, looking in the direction of the arrow; and Figs. 5, 6, and 7 are similar cross-sections illustrating the application of my invention to brake-beams of various forms, the last six figures being on a larger scale than Fig. 1.

The compression member, strut, brake-heads, and shoes may be made in any of the well-known forms, and in themselves constitute no part of my invention, which consists, as I have already intimated, in the improved method of attaching the truss strap or rod to the compression member, and I have accordingly shown this method as applied to beams of various forms.

In the first four figures the compression member A is made of a piece of rectangular pipe bent, preferably, into the form shown in Fig. 1, with the ends again bent into a line parallel with the face of the wheels. Over this member is passed the strut B, having a socket of suitable form to engage with the rectangular compression member. The truss-rod C is preferably made in the form of a strap of malleable iron and of any suitable dimensions—as, for example, three-eighths of an inch in thickness, two inches in breadth, and of a length depending upon the length of the beam. In applying this strap it is suitably heated, passed over the truss-rod, and

its ends then bent around the ends of the compression member, as shown more particularly in Fig. 3.

The brake-heads D are provided with sockets or mortises of suitable dimensions to enable the brake-head to be slipped over the end of the compression member and the strap bent around the same. When the parts are put together in this manner, the shrinking of the strap on cooling will bind all the parts together and the strap will be held by means of the brake-heads in such manner that it is rendered absolutely impossible for it to slip out of its place unless it should become broken.

In Fig. 5 I have shown this method of fastening the strap as applied to a beam, the compression member of which is made of channel-iron; in Fig. 6 to a beam wherein such member is made out of a solid bar, and in Fig. 7 to a beam having a compression-head made of cylindrical tubing, the method of attaching the truss-strap being the same in each case, it being bent around the ends of the compression member and held in place by passing the brake-heads over the ends of the member and strap. In this way I am enabled to produce a beam which is economical in construction and of exceedingly great durability, since it is practically impossible for any of the parts to become loose or separated from each other so long as they remain unbroken, and while I have described more or less precise forms I do not intend to be unduly limited thereto, but contemplate changes in form, proportion, and the substitution of equivalent members, as may be desirable or necessary. For example, the truss-rod may be round instead of flat or of any other suitable form, and if round its ends where they are bent around the end of the compression member may or may not be flattened, as desired. Therefore when I speak of a "truss-strap" in the claims I mean to equally include truss-rods under this designation.

I claim—

1. The method of securing the truss-strap to the compression member of a brake-beam, which consists in bending the ends of such strap entirely around the ends of the member and passing the brake-heads over both strap

and member, whereby the strap is bound between the brake-head and the member on both sides of the latter and held in place without the use of bolts, substantially as described.

5 2. In a brake-beam, the combination of a compression member, a strut, a truss-strap passing over the strut and having its ends bent around the ends of the compression member, and brake-heads fitting over the
10 ends of the compression member and strap and holding the parts together, substantially as described.

3. In a brake-beam, the combination of a compression member, a truss rod or strap the ends whereof are bent over the ends of such member, brake-heads inclosing the ends of the truss-rod and member and securing the rod in place, and a strut interposed between the compression member and truss-rod, substantially as described. 15

DAVID L. BARNES.

Witnesses:

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