(No Model.)

A. H. MARDEN.

CAR BRAKE.

No. 270,962. Patented Jan. 23, 1883.

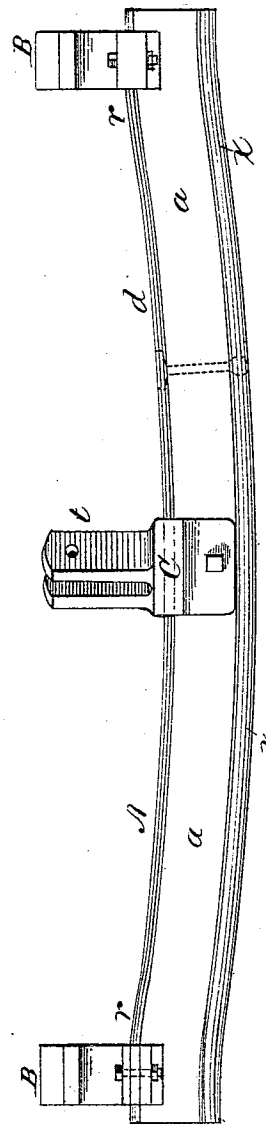


Fig. 1.

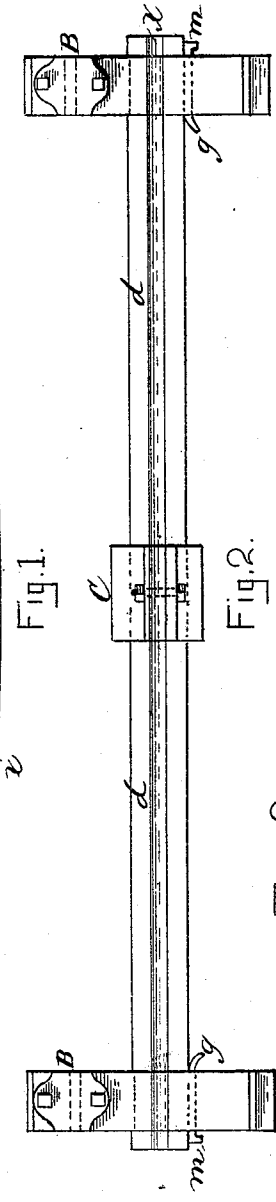


Fig. 2.

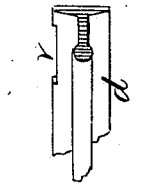


Fig. 6.

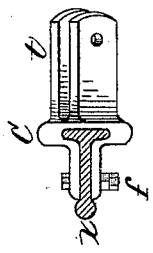


Fig. 5.

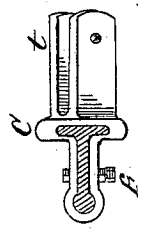


Fig. 4.

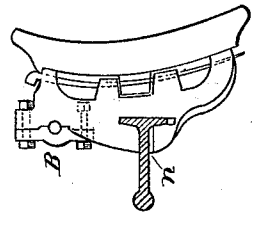


Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 270,962, dated January 23, 1883.

Application filed September 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALDIS HENRY MARDEN, of Cambridge, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Car-Brakes, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a top or plan view; Fig. 2, a side elevation; Fig. 3, an end view; Figs. 4 and 5, views of the clamp, and Fig. 6 a sectional view of the beam.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to the class of car-brakes employed on steam and horse cars; and it consists principally in a novel construction and arrangement of the beam of the brake, as hereinafter more fully set forth and claimed, by which a stronger, more durable, and effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents the beam, B B the brake-heads, and C the lever-clamp.

The heads are designed to be suspended to the truck and provided with shoes in the usual manner.

The beam is composed of iron or steel, rolled or pressed into shape, and consists of a flat body, *a*, having a double flange or T-edge, *d*, and a ribbed edge, *x*, and is so arranged when in position for use in the brake that the body *a* will be in a horizontal or nearly horizontal position, or so that its flanges *d* will stand nearly at right angles to the line of strain, as best shown in cross-section in Figs. 3, 4, and 5.

The brake-heads are mortised or formed to receive the ends of the beam, leaving a part of the body *a* and rib *x* projecting therefrom, as seen in Fig. 3, the beam being secured in the heads by means of the keys *m m* in the following manner, viz: A notch, *v*, corresponding in width with the thickness of the brake-heads, is cut in the edge *d*, near each end of the beam, and that part of the mortise *n* which receives the body *a* is made slightly deeper than the thickness of the body. That part of the mortise which receives the flanged edge *d* is also slightly higher or deeper than the width of said edge, so that when the end of the beam is inserted and the key *m* is driven into the mortise under the edge the beam will be forced upward, causing the brake-head to enter the notch *v*, thus locking the beam and head together in a manner which will be readily obvious without a more explicit description.

The notches *v* may be made in either the upper or lower side of the edge *d*, as desired, the keys being inserted opposite the notches and bent down, as shown at *g g*, Fig. 2, to prevent them from being accidentally removed.

The beam may be constructed straight or may be curved on the line of strain, as shown in Fig. 1, the curve terminating at *r*, or near where the beam enters the heads, the curved beam being preferable to the straight one, as affording the greatest possible degree of strength.

A clamp, C, is attached to the center of the beam by the bolt and nut *f*, and is provided with two arms, which project horizontally from its inner face, being arranged diagonally thereon to receive the brake-lever. (Not shown.) The body of the clamp is mortised or formed to fit the beam to which it is secured, and is preferably so constructed as to entirely encircle the same, as seen in Fig. 4, but may be formed as shown in Fig. 5, if desired, or so as not to extend around the rib *x*.

The object of the rib is to keep the body *a* from warping, or in a proper position when the beam is subjected to a heavy strain, and is preferably made round, or nearly so, as seen in Figs. 3 and 4; but it may be made in any other shape to successfully accomplish the same result.

I do not confine myself to securing the beam in the heads by means of the notches *v* and keys or pins *m*, as it may be secured by nuts and bolts, or in any other convenient and proper manner, without departing from the spirit of my invention.

Having thus explained my improvement, what I claim is—

1. As a new article of manufacture, a rolled metal bow-shaped brake-beam for railroad-cars,

consisting of a T-shaped bar provided with a strengthening-rib on the edge opposite the double flange or cross, the curve of said beam being outward in the direction of the strain, substantially as described.

2. The combination of a T-shaped brake-beam, the flange or cross of which is provided with notches near the ends of the beam, a brake-shoe having a T-shaped slot into which said beam fits, and a key which passes through said slot opposite the notch in the beam, substantially as described.

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