

No. 762,288.

PATENTED JUNE 14, 1904.

S. A. CRONE.
BRAKE BEAM.

APPLICATION FILED JAN. 27, 1904.

NO MODEL.

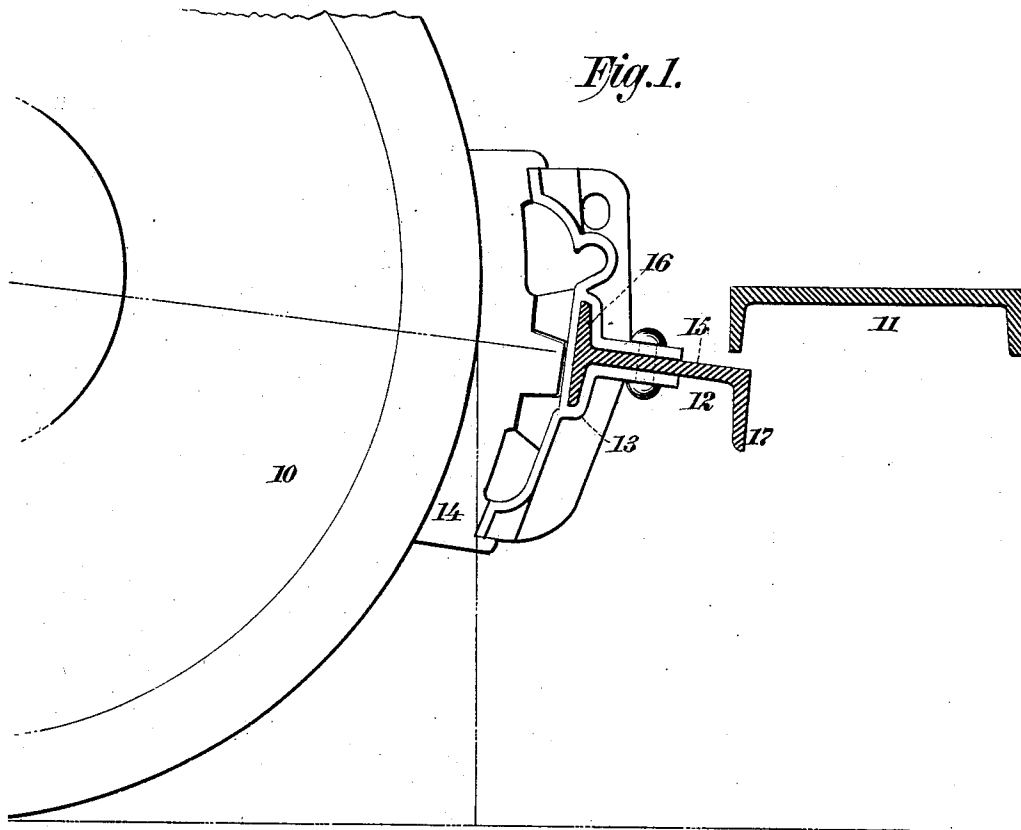
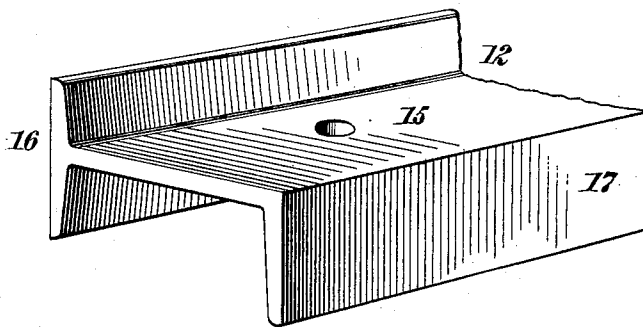


Fig. 2.



WITNESSES:

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BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 762,288, dated June 14, 1904.

Application filed January 27, 1904. Serial No. 190,766. (No model.)

To all whom it may concern:

Be it known that I, SETH A. CRONE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Brake-Beams, of which the following is a specification.

The invention relates to improvements in brake-beams; and it consists in the novel features hereinafter described, and particularly pointed out in the claims.

Brake-beams of the class to which my invention pertains comprise a rolled body-beam of suitable length, brake-heads on the ends thereof to receive the brake-shoes, and means, such as a fulcrum, for pivotally receiving the brake-lever; and my invention has for its object to produce a novel body-beam for use in brake-beams, my purpose being to enhance the efficiency and durability of the beam and insure certainty of operation and convenience in its use.

The body-beams for brakes have heretofore ordinarily, though by no means exclusively, been formed of a length of rolled I-beam, and in use these I-beams extend transversely of the truck with usually the flanges arranged vertically and the web horizontally. One objection to these beams has been a lack of strength therein in a vertical direction without excessive weight of metal. Another objection has been the fact that upon their upper surface they accumulate dirt and water and become rusty and corroded, and another objection is that the outer upwardly-extending flange of the beam has been found to at times wedge against the adjacent side of the sand-plank or channel-bar of the truck and render the brakes inoperative or at least unreliable. These several objections are overcome by my invention, by which I produce a beam of increased strength in a vertical direction without any increase in the weight of metal and one which will shed water and dust and not strike or wedge against the sand-plank or channel-bar, but, on the contrary, may at its outer edge project below said bar without any lowering of the beam for that purpose. The several purposes of my inven-

tion are accomplished by making the rolled body-beam of a new shape, more especially at its outer edge portion, and this shape may be understood by a comparison of it with the outer edge of the I-beam above referred to. At the outer edge of the I-beam the flange extends upwardly above and downwardly below the web, and in accordance with my invention I so roll the beam that that part of the metal which formed the upwardly-extending flange is entirely transferred into the downwardly-extending flange, with the result of not increasing the weight of the beam, but giving the latter at its outer edge a downwardly-extending flange of increased depth and strength and leaving the upper surface of the beam at its outer portion smooth and flangeless, the said downwardly-extending flange being of greater depth below the web than the depth of the flange at the inner edge of the beam below the web.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section through a portion of a car-truck and illustrates my new brake-beam in position and in its relation to the sand-plank or channel-bar, and Fig. 2 is an enlarged detached perspective view of a portion of the body-beam embracing my invention.

In the drawings, 10 indicates a car-truck wheel, 11 the usual sand-plank or channel-bar, and 12 the body-beam for the brakes, said beam 12 extending transversely of the truck and carrying on its ends the heads 13 to receive the brake-shoes 14. The heads 13 and shoes 14 are of known construction and in themselves form no essential part of the present invention, which resides solely in the construction of the body-beam 12 without regard to the details of the form or construction of the brake-heads and brake-shoes, which are ordinarily in their main parts of standard construction.

The body-beam 12 in its preferred form throughout comprises the horizontal web and edge flanges 16 and 17, the flange 16 being

at the inner edge of said web and extending vertically upwardly above and downwardly below said web, and the flange 17 being at the outer edge of said web and extending downwardly therefrom to a greater distance than the flange 16 projects downwardly below said web. There is about as much metal in the flange 17 below the web 15 as there is in the flange 16 above and below said web. The width of the beam 12 will preferably be sufficient to enable said beam to at all times extend at its outer edges below the sand-plank or channel-bar 11, as shown, this width of beam being possible of successful and convenient use in such relation to the said plank or bar and at the required elevation above the plane of the track-rails by reason of the fact that the flange 17 projects downwardly only and leaves the upper outer surface of the beam 12 smooth and without any upwardly-extending features likely to strike or wedge against said plank or bar.

One of the advantages secured by my invention is that the beam may extend below and in near relation to the channel-bar or sand-plank of a truck and also be brought to a proper elevation above the track-rails without any sacrifice in the strength of said beam in a vertical direction, there being in accordance with my invention not only an absence of a sacrifice of strength in the beam vertically considered, but a positive and very material increase in such strength. I am also enabled with my invention to employ a beam of increased width across the web, because the absence of any upwardly-projecting features at the outer edge of the beam enables me to extend the beam below and close up to the sand-plank or channel-bar. When the beam 12 is mounted in a truck, it inclines slightly downwardly toward its outer edge, as shown, and hence the absence of any upwardly-projecting features at the outer edges of the beam results in the further important advantage of enabling the beam to readily shed water, dust, and other foreign matter.

One of the important features of the beam 12 is that the flange not only extends downwardly only, but that it is of greater depth below the web than that portion of the flange 16 which projects below said web, since thereby the beam has imparted to it increased power of resistance in a vertical direction without increase in the weight of the beam.

My invention results in the attainment of many advantages in brake-beams without increasing the cost or complicating the same and without rendering necessary any changes

in those features of body-beams, brake-heads, or brake-shoes regarded as standard.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A brake-beam comprising a rolled-metal body-beam having the horizontal web, flanged inner edge and flanged outer edge, the flange at the outer edge of said beam extending downwardly only, leaving the upper outer surface of said body-beam smooth; substantially as set forth.

2. A brake-beam comprising a rolled-metal body-beam having the horizontal web, flanged inner edge and flanged outer edge, the flange at the outer edge of said beam extending downwardly only and to a greater depth than the downwardly-extending flange at the inner edge of said body-beam; substantially as set forth.

3. A brake-beam comprising the rolled-metal body-beam having the horizontal web, the upwardly and downwardly extending flange 16 at its inner edge, and the flange 17 at its outer edge, said flange 17 extending downwardly only; substantially as set forth.

4. A brake-beam comprising the rolled-metal body-beam receiving on its ends the brake heads and shoes and having the horizontal web and flange 17, the latter being at the outer edge of said web and extending downwardly only, leaving the upper outer surface of said body-beam smooth; substantially as set forth.

5. A brake-beam comprising the rolled-metal body-beam having the horizontal web, the upwardly and downwardly extending flange 16 at its inner edge, and the flange 17 at its outer edge, said flange 17 extending downwardly only and containing more metal and being of greater depth than that portion of the flange 16 which projects below said web; substantially as set forth.

6. A brake-beam comprising a rolled-metal body-beam provided with brake heads and shoes and having the horizontal web, flanged inner edge and a downwardly-extending flange at its outer edge, the latter flange being of greater depth below the web than the depth below the web of the flange at the inner edge of said beam; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 26th day of January, A. D. 1904.

SETH A. CRONE.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.