

No. 720,677.

PATENTED FEB. 17, 1903.

S. A. CRONE.
BRAKE BEAM.

APPLICATION FILED DEC. 18, 1902.

NO MODEL.

Fig. 1.

Fig. 2.

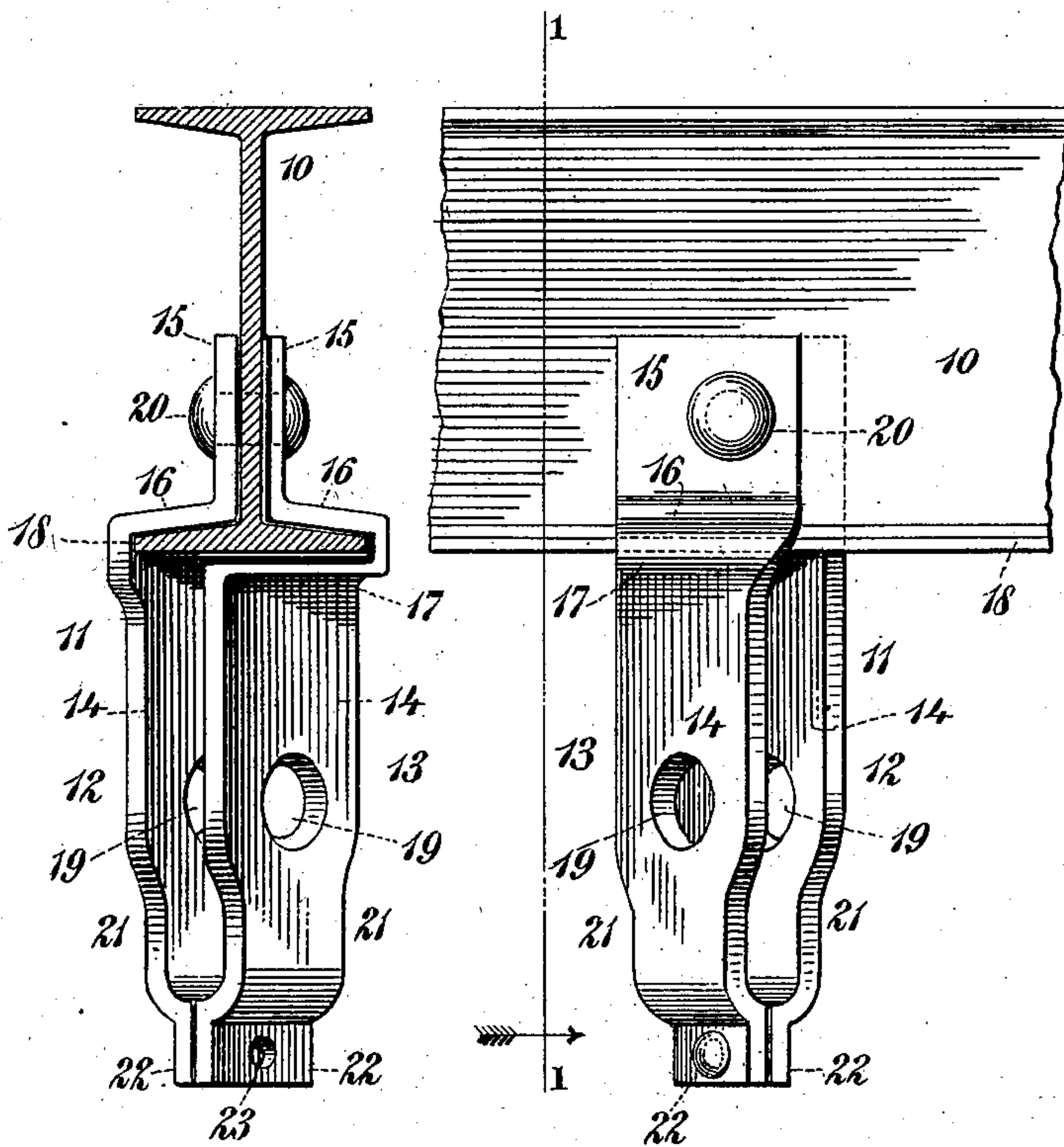
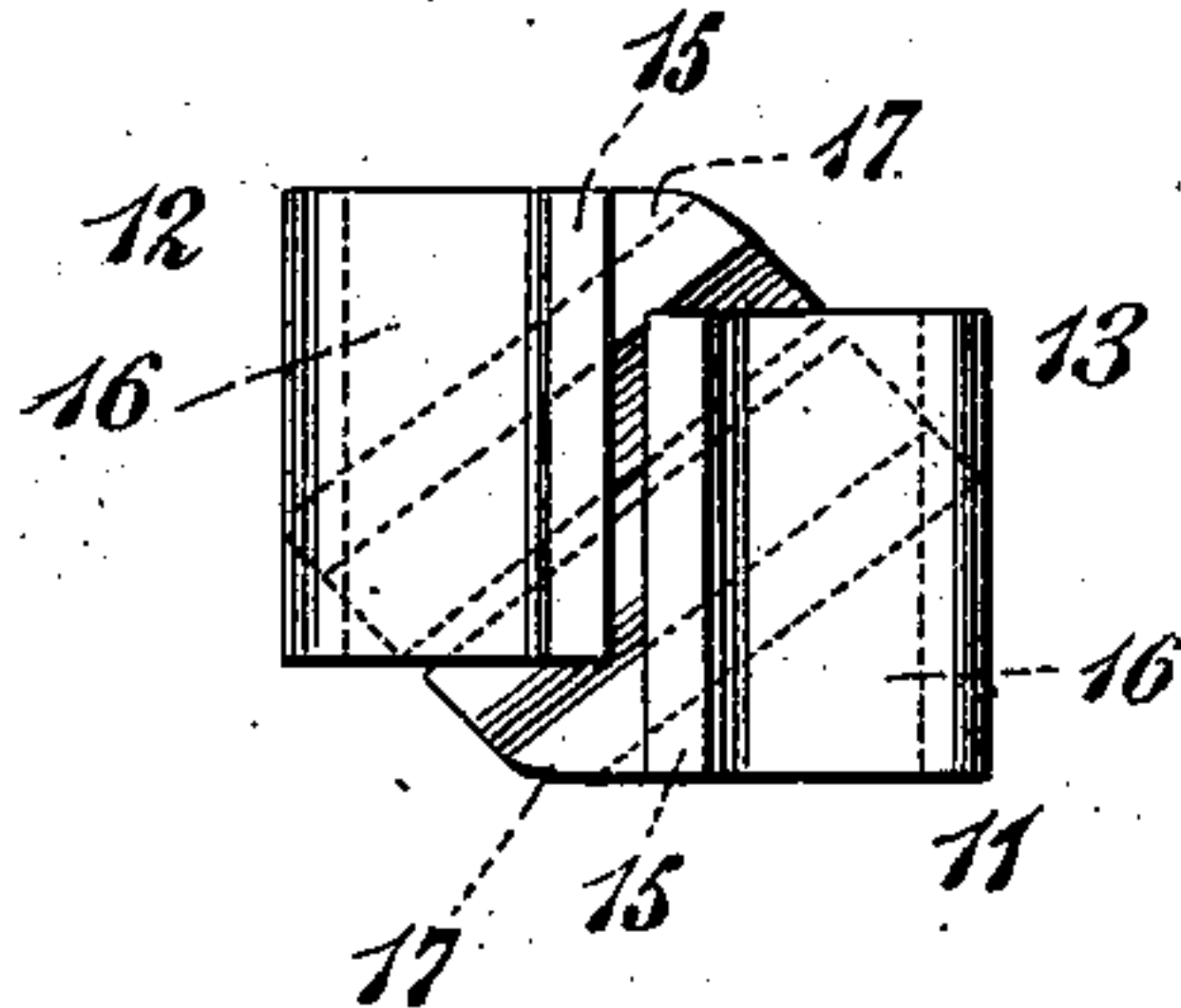


Fig. 3.



WITNESSES:

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BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 720,677, dated February 17, 1903.

Application filed December 18, 1902. Serial No. 135,704. (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 for railway-cars; and it consists in the novel features of construction and combinations of parts 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 of standard construction on the ends thereof, and a fulcrum for the brake-lever; and my invention has for its object to produce a novel fulcrum for use in such beams, said fulcrum being efficient and capable of being firmly and quickly applied to the beam and also being capable of ready manufacture of either forged or cast metal at minimum expense. The fulcrum of my invention is formed of two pieces of metal of the outline hereinafter described, the said pieces at their outer end being riveted together and at their other end engaging the flange and web of the beam and riveted to said beam.

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

Figure 1 is an edge view of a fulcrum constructed in accordance with and embodying my invention, the fulcrum being shown as secured to a usual body-beam, the latter being in section on the dotted line 1 1 of Fig. 2. Fig. 2 is a side elevation, partly broken away, of a brake-beam equipped with a fulcrum embracing my invention, and Fig. 3 is a detached top view of the fulcrum.

In the drawings, 10 designates a portion of the usual body-beam, and 11 the novel fulcrum of my invention, which is applied centrally on one edge of the beam, the latter preferably being of commercial I shape. The fulcrum 11 is formed of the two separate pieces numbered 12 13, respectively, which when brought together form the vertical sides 14 14, having at one end the flanges 15, 16, and 17, while at the other end of said sides

14 are the corresponding flanges 22, provided with apertures 23 to receive a rivet by which the sides 14 at their outer end may be effectually secured together. The flanges 15, 16, and 17 at the inner end of the sides 14 respectively engage the sides of the web of the beam 10 and also the opposite sides and outer edges of the flange 18 of said beam 10. The sides 14 of the fulcrum are provided with the corresponding apertures 19 to receive the bolt upon which the usual brake-lever (not shown) will be mounted, and the flanges 15 of the fulcrum members are provided with suitable apertures to receive the rivet or bolt 20, by which the fulcrum may be secured to the beam 10. The outer end portions of the fulcrum members are preferably cut away along their edges, as at 21, and the outer ends of said members correspondingly turn inward toward each other to close the outer end of the fulcrum and bring the flanges 22 together preparatory to a rivet being applied through the apertures 23 of said flanges.

The members 12 13 of the fulcrum may each be formed from a blank or strip of forged metal, said strip or blank being bent to form the side 14, having the flanges 15, 16, and 17 at one end and the flange 22 at the other end, and when the two members thus formed are brought together and riveted they constitute a complete fulcrum of very efficient and durable character. The fulcrum members being of forged metal will not likely become fractured or broken during shipment or their application to the beam 10, and when thus formed the fulcrum members may be riveted together at their outer end either before or after their application to the beam 10, it being possible with a fulcrum of the character described to spring the inner ends of the members thereof outwardly from each other, so as to apply the fulcrum upon the beam 10 directly over the flange 18. The cutting away, as at 21, of the outer portions of the fulcrum members is to enable the more ready springing outwardly from each other of the inner ends of said members and also to enable a greater range of movement in the brake-lever without striking the closed outer end of the fulcrum. It is obvious, however, that the fulcrum members before being riveted together at their outer end

may be applied to the opposite sides of the beam 10 and then riveted through the flanges 22. It is evident also that should it be desired to remove the fulcrum from the beam 5 10 the rivets binding the parts of the fulcrum together and to the beam 10 may be readily cut for such purpose.

While I prefer that the fulcrum members be made of forged metal, it is obvious that a 10 portion of my invention may be realized should the fulcrum members be made of cast metal, such as malleable iron, and therefore I do not desire to limit my invention in every instance to the employment of forged metal 15 in the manufacture of the parts 12 13 thereof.

The flanges 15 at the inner end of the fulcrum members correspond with each other and closely engage the web of the beam 10, and the flanges 16 likewise correspond 20 with each other and engage the surfaces of the flange 18 at the opposite sides of said web, and thence the fulcrum members engage the opposite edges of the beam-flange 18, and thence turn inwardly toward each 25 other at the outer surfaces of the said flange 18 and form the substantially triangular-shaped flanges 17, the latter assuring the requisite parallel angularity in the sides 14 for the reception between the latter of the brake- 30 beam. It is evident that the flanges 17 need not actually press against the outer surface of the beam-flange 18, since the pull on the fulcrum is always outward in a direction toward the outer closed end of the fulcrum.

35 The fulcrum of my invention is thus in its preferred construction formed of two pieces of forged metal, and it is obvious that the fulcrum described is efficient and capable of ready manufacture at the minimum expense.

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

1. The brake-beam fulcrum consisting of the two fulcrum members 12, 13, having at 45 their inner end the flanges 15, 16 and 17, and at their outer end the flanges 22, the said flanges 15 being apertured to receive the bolt or rivet by which the fulcrum may be secured to the body-beam, the flanges 22 being aper- 50 tured to receive the bolt or rivet by which the outer end of the fulcrum members may

be firmly secured together, and the sides of the fulcrum members being apertured to receive the bolt for the brake-lever; substantially as set forth.

2. The brake-beam fulcrum consisting of 55 the two forged-metal members 12, 13, having at their inner end the flanges 15, 16 and 17, and at their outer end the flanges 22, the said flanges 15 being apertured to receive the bolt or rivet by which the fulcrum may be secured 60 to the body-beam, the flanges 22 being apertured to receive the bolt or rivet by which the outer end of the fulcrum members may be firmly secured together, and the sides of the fulcrum members being apertured to re- 65 ceive the bolt for the brake-lever; substantially as set forth.

3. The brake-beam fulcrum consisting of the two fulcrum members 12, 13, having at 70 their inner end the flanges 15, 16 and 17, and at their outer end the flanges 22, the said flanges 15 being apertured to receive the bolt or rivet by which the fulcrum may be secured to the body-beam, the flanges 22 being aper- 75 tured to receive the bolt or rivet by which the outer end of the fulcrum members may be firmly secured together, and the sides of the fulcrum members being apertured to receive the bolt for the brake-lever and being cut 80 away, as at 21, at their outer edge portions; substantially as set forth.

4. The brake-beam fulcrum consisting of the two independent fulcrum members 12, 13, having at their inner end the flanges 15, 16 and 17, the said flanges 15 being apertured 85 to receive the bolt or rivet by which the fulcrum may be secured to the body-beam, the angularly-disposed sides of the members being apertured to receive the bolt for the brake-beam, and the outer end of the fulcrum 90 being securely closed; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 17th day of December, A. D. 1902.

SETH A. CRONE.

Witnesses:

ARTHUR MARION,
CHARLES C. GILL.