

No. 838,776.

PATENTED DEC. 18, 1906.

S. A. CRONE.
BRAKE BEAM FOR RAILWAY AND OTHER CARS.
APPLICATION FILED JUNE 11, 1906.

FIG. 1

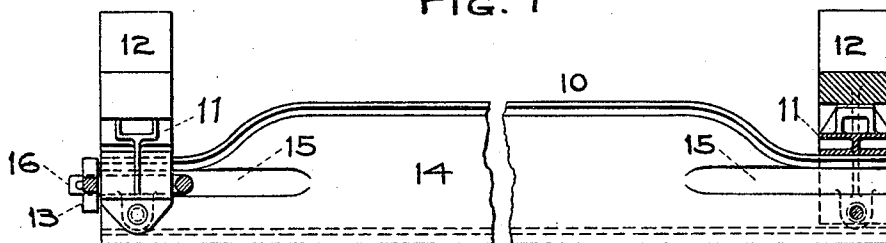


FIG. 2

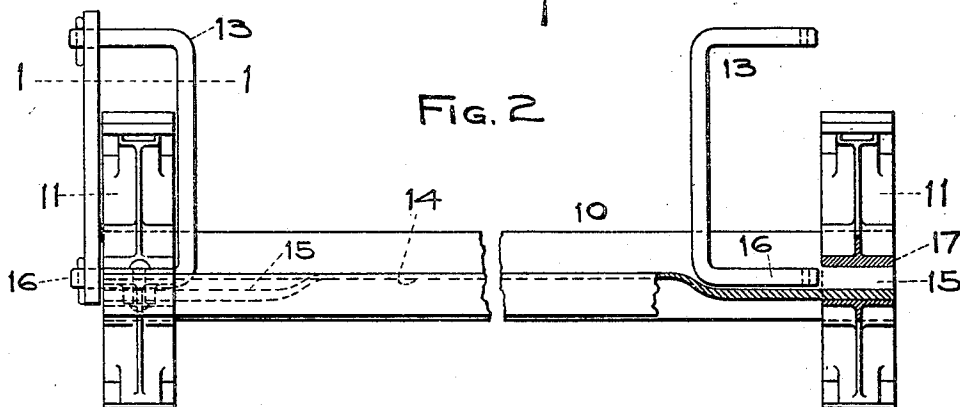
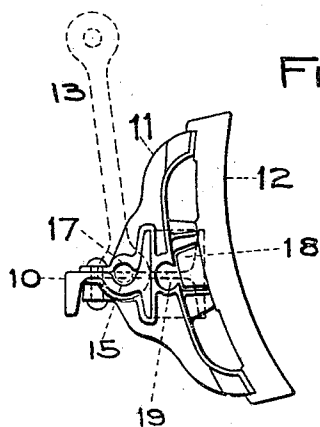


FIG. 3



WITNESSES:

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SETH A. CRONE, OF NEW YORK, N. Y.

BRAKE-BEAM FOR RAILWAY AND OTHER CARS.

No. 838,776.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed June 11, 1906, Serial No. 321,149.

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 city, in the county of New York and State of New York, have invented certain new and useful Improvements in Brake-Beams for Railway and other Cars, of which the following is a specification.

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

Brake-beams of the character to which my invention more particularly pertains comprise a rolled body-beam, brake-shoe heads on the ends thereof, brake-shoes carried by said heads, and a fulcrum secured to one edge of the center of the beam and having angularly-disposed sides which receive between them the usual brake-lever, the said sides having holes through them to receive the pin on which the brake-lever is supported. The ends of the beam are supported by hinged hangers whose lower ends engage the brake-shoe heads.

My invention resides in a novel construction of the end portions of the body-beam whereby, among other important results secured, I am enabled to effect the connection of the hangers at points substantially in line with the center of the heads and directly in line with and back of the usual central lugs on the brake-shoes, the lower wrists of the hangers being set within flutes or grooves formed in the web of the body-beam and having their horizontal centers substantially in line with or slightly below the upper surface of said web. In the formation of the flute or groove in and at each end of the web of the beam to receive the hanger I make provision for increasing the thickness of the web at the walls of said flute or groove, so that the wear of the hanger against the web may not reduce the web to an undesirable extent within any reasonable period. When a car-wheel is turning upwardly toward the brake-shoe, the web of the beam is pressed against the lower wrist of the hanger, and to prevent the unduly rapid wearing out of the web under the condition stated is one of the purposes of my invention. I do not cut out any portion of the web of the beam, but at the

ends of the latter form in said web longitudinal grooves or flutes by a method of corrugation, whereby the web of the beam at said ends only becomes depressed, the web preferably narrowing to an extent greater than would be necessary if the walls of the groove were to remain of the general thickness of the web, so that an increased thickness of said web may be formed to constitute the walls of said groove, whereby the web at the ends of the beam about the grooves is thicker, as shown in Figs. 2 and 3, than the general initial thickness of the web. The formation of the said grooves and the increased thickness of the web about the same result in one flange of the beam at its ends being carried inwardly, as shown in Fig. 1. The grooves or flutes provided in the web of the beam are made longer than the width of the brake-shoe heads to enable the convenient application of the hangers to the beam.

The hangers I prefer to employ and which are illustrated in this application are the hangers shown and described in Letters Patent No. 773,003, granted October 25, 1904, to Seth A. Crone.

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 top view, partly broken away and partly in section, of a brake-beam constructed in accordance with and embodying the invention, the brake-hanger at the left-hand end of the beam being in section on the dotted line 1 1 of Fig. 2 and the brake-shoe head and shoe at the right-hand end of the beam being in horizontal section on a line just above the body-beam, so as to illustrate the longitudinal groove or flute formed in the latter to receive the lower wrist of the hanger, which is omitted from the right-hand side of Fig. 1. Fig. 2 is an elevation, partly in section, of same, taken from the outer side of the body-beam or in the direction of the arrow shown in Fig. 1, the hanger at the left-hand end of the beam being shown complete and in position and the body-beam and head at the right-hand side of Fig. 2 being shown in section, so as to illustrate the method of applying the main member of the hanger to position. Fig. 3 is an end view of the beam with the head and shoe thereon

and with the hanger shown by dotted lines, Fig. 3 being taken from the right-hand end of either Fig. 1 or 2.

In the drawings, 10 designates the body-beam, 11 the brake-shoe heads, 12 the usual brake-shoes carried by said heads, and 13 the hangers.

The beam 10 is a rolled flanged beam of any suitable form in cross-section, and its ends enter conforming sockets formed in the cast heads 11 to receive them, said sockets in this instance differing from the sockets in usual brake-shoe heads, because of the fact that they are conformed to the new shape in cross-section I give to the web of the beam, especially at the lower sides of the ends of the latter; but in other respects said heads are in general of usual construction.

The beam 10, except at its end portions, may be regarded as of known form and construction, and this beam is initially of uniform width and thickness from end to end. In my treatment of the ends of the beam 10 said ends are given a new shape and afford new conveniences with respect to the hangers and their location in relation to other parts of the brake-beam as a whole.

The web 14 of the beam 10 is at its end portions formed with the flutes or grooves 15, which commencing at points inward from the heads 11 extend outwardly to the extreme outer edges of the beam and leave within the sockets of said heads recesses or seats set below the upper surface of the web 14 to receive the lower wrists 16 of the hangers 13, the circle of said recesses being completed and closed at the top by upwardly-concaved recesses 17, formed in said heads and matching the recesses formed by the grooves 15, whereby housings circular in cross-section are formed to receive said wrists 16. The flutes or grooves 15 are considerably longer than the width of the heads 11, so that the lower wrists of the hangers may be conveniently applied to position, as indicated at the right-hand side of Fig. 2, where one member of the hanger is shown set into the groove 15 at the inner side of the head 11 preparatory to being pushed outwardly to carry its lower wrist into the housing formed by the recesses 15 17.

I preferably thicken the web 14 about the grooves or flutes 15, as denoted in Figs. 2 and 3, the walls of these grooves being subjected to considerable wearing action against the wrists 16, especially when the car-wheels are turning upwardly against the brake-shoes.

The seats formed by the grooves 15 for the lower wrists of the hangers are at about the transverse center of the brake-shoe heads and in line with and back of the center lugs

18 of the shoes 12, which is a desirable location for said seats in respect of the efficiency of the brake-beam structure as a whole.

The fluting of the end portions of the web 14 results in a narrowing of the beam at its ends, which is at times a convenience in the saving of space, more especially for inside-hung brakes, and this narrowing of the ends of the beam is increased when the web is thickened about said grooves 15 in the manner shown. Preferably the narrowing of the ends of the beam 14 should be permitted to displace inwardly the ends of one flange only of the beam, leaving the other flange straight from end to end, as shown; but this is not a necessity. To form the grooves 15 without allowing either edge of the beam to be displaced inwardly would result in the web 14 at the grooves being stretched and reduced in thickness, and it is desirable that this result be avoided, since it is intended that the beam shall last as long as possible and be resupplied with heads as the latter become worn or broken.

In addition to the seats formed by the grooves 15 for the lower wrists of the hangers I provide each head 11 with a recess 19, back of the shoe-lug 18, to receive the wrist of the hanger in instances in which it may be deemed necessary or desirable to locate the lower end of the hanger forward of the front flange on the beam 10.

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

1. A brake-beam comprising a flanged body-beam, heads, shoes and hangers, the web of the beam at its ends being fluted to form seats for the lower wrists of the hangers at about the center of the heads and in line with the center lugs on the shoes; substantially as set forth.

2. A brake-beam comprising a flanged body-beam, heads, shoes and hangers, the web of the beam at its ends being fluted to form seats for the lower wrists of the hangers at about the center of the heads and in line with the center lugs on the shoes, and the walls about said flutes being thicker than the other portions of the web; substantially as set forth.

3. A brake-beam comprising an integral flanged rolled body-beam, heads and shoes, the web at the end portions of the body-beam being fluted and the width of said ends thereby reduced; substantially as set forth.

4. A brake-beam comprising an integral flanged rolled body-beam initially of uniform width and thickness, the web at the end portions of said beam being fluted and thickened about the walls of the flutes, whereby said beam at its ends becomes reduced in width; substantially as set forth.

5 5. A brake-beam comprising a flanged rolled body-beam, heads, shoes and hangers, the web of the beam being fluted at its end portions to form seats for the lower wrists of the hangers and said flutes being greater in length than the width of said heads; substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 9th day of June, A. D. 1906.

SETH A. CRONE.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.