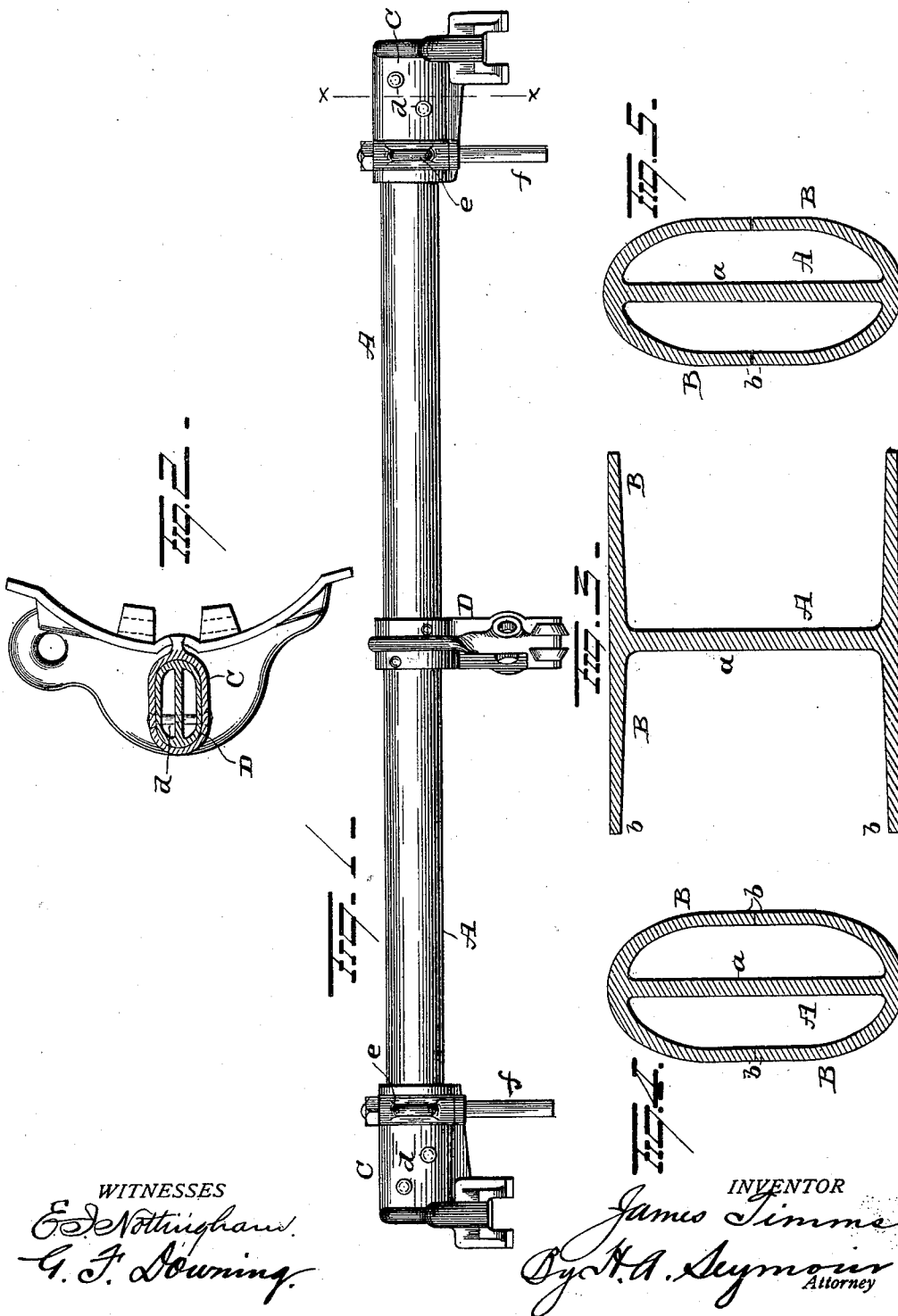


No. 673,305.

Patented Apr. 30, 1901.

J. TIMMS.
BRAKE BEAM FOR CARS.
(Application filed Jan. 18, 1901.)

(No Model.)



WITNESSES
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JAMES TIMMS, OF COLUMBUS, OHIO.

BRAKE-BEAM FOR CARS.

SPECIFICATION forming part of Letters Patent No. 673,305, dated April 30, 1901.

Application filed January 18, 1901. Serial No. 43,773. (No model.)

To all whom it may concern:

Be it known that I, JAMES TIMMS, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful
5 Improvements in Brake-Beams for Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 My invention relates to an improvement in metal beams, and more particularly to brake-beams for railway-cars; and it consists in the details of construction, as will be more fully described, and pointed out in the claims.

15 In the accompanying drawings, Figure 1 is a view in elevation of a brake-beam for railway-cars constructed in accordance with my invention. Fig. 2 is a view in section on the line *x x* of Fig. 1. Fig. 3 is a view of the
20 I-beam from which the oval beam is constructed. Fig. 4 is a view in section of the oval beam, showing the edges of the side flanges united; and Fig. 5 is a similar view showing the edges of the side flanges abut-
25 ting.

While I have illustrated my improvement in the form of a brake-beam for cars, I would have it understood that I do not confine the application of the improvement to brake-
30 beams, but claim the structure for any and all purposes where such a beam could be advantageously used.

A represents the beam, oval in cross-section and provided with a central integral web *a*.
35 In constructing the oval beam I employ an I-beam A, having comparatively wide top and bottom flanges B, which latter when bent inwardly toward the center meet about midway the web *a*. The edges *b* of the flanges B may
40 be united by welding, as shown in Fig. 4, or, if preferred, the flanges may be brought together without joining them, as shown in Fig. 5, either method forming a structure specially designed for resisting great strains. In using
45 the device as a brake-beam, as shown in Fig. 1, the brake-heads C should be provided with an oval recess, as shown in Fig. 2, to receive

the ends of the beams and are preferably secured thereon by rivets or other devices *d*, passing through the brake head and beam. 50 These brake-heads, or rather the sleeves of the brake-heads, are also provided on their upper faces with seats *e* for the reception of the rods *f*, which latter are designed to rest adjacent to the inner faces of the wheels and
55 limit the swinging movement of the beam. Secured centrally to the beam is the stirrup D, to which the braking mechanism is attached, the stirrup being preferably secured in place against lateral displacement by riv-
60 ets passing through the same and through the beam. With this construction the centrally-located web extends lengthwise of the beam and transversely through its long axis, and as the beam is designed to be used with
65 its long axis in the direction of the strain it is evident that it will possess great resisting power with a minimum use of metal, thus enabling a brake-beam capable of withstanding any strain that may be put upon the same to
70 be constructed without the use of any of the braces or trusses now universally employed for strengthening them.

It is evident that changes in the construction and relative arrangements of the several
75 parts might be made without avoiding my invention, and hence I would have it understood that I do not restrict myself to the particular construction and arrangement of parts shown and described; but, 80

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a beam consisting of a web having top and bottom
85 flanges bent or curved toward each other and having their free edges abutting at a point spaced laterally from the web.

2. As an article of manufacture, a beam consisting of a web having two flanges at its
90 respective edges, said flanges being curved toward each other at respective sides of said web and having their edges abutting, said flanges forming an ellipse.

3. The method of making a beam, consisting in taking a beam comprising a web and top and bottom flanges and applying pressure in opposite directions to said flanges until
5 their free edges meet.

4. The method of making a beam, consisting in taking a beam comprising a web and top and bottom flanges, applying pressure to said flanges until their free edges meet at the

sides of and spaced from said web and then 10 welding said free edges of the flanges together.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES TIMMS.

Witnesses:

A. W. BRIGHT,

W. CLARENCE DUVALL.