(No Model.) 2 Sheets—Sheet 1.

J. TIMMS.

BRAKE BEAM.

No. 587,071. Patented July 27, 1897.

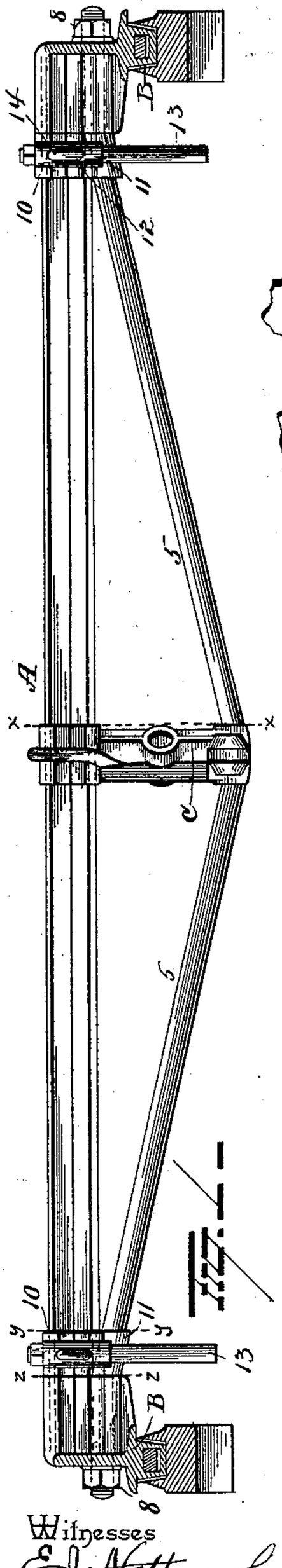

Fig. 1.

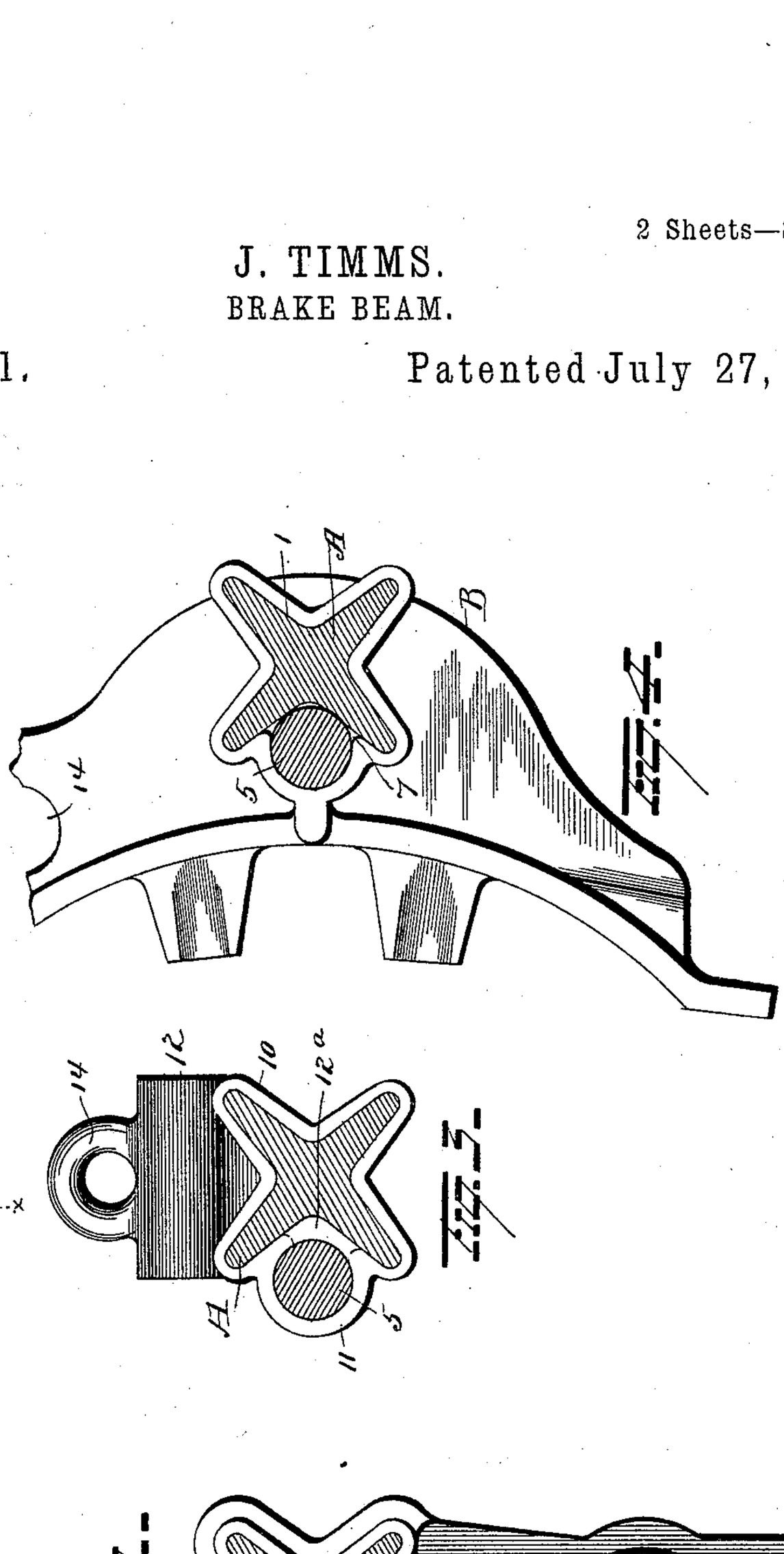

Fig. 4.

Fig. 5.

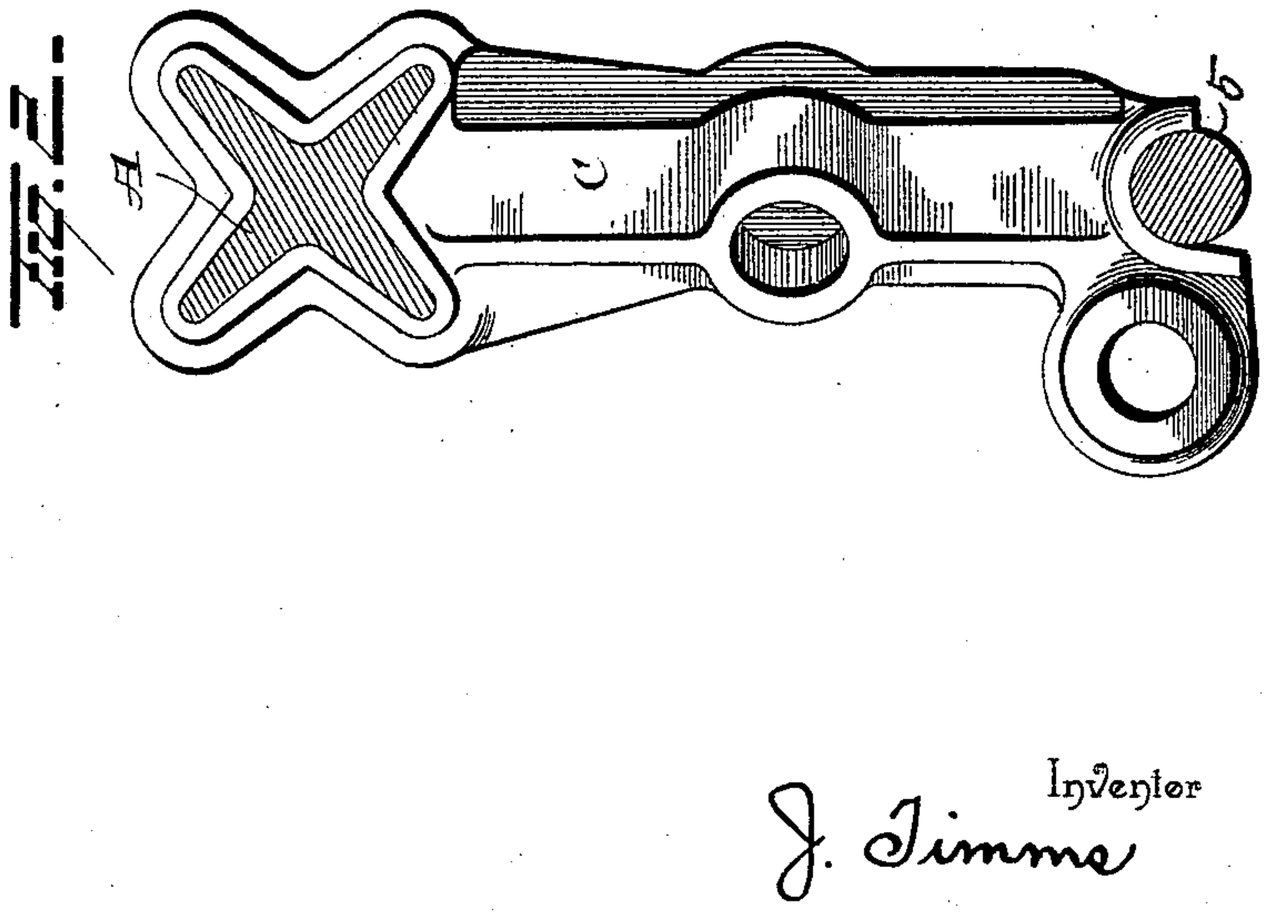

Fig. 2.

Witnesses
E. D. Nottingham
G. F. Downing.

Inventor
J. Timms
By H. A. Seymour
Attorney

(No Model.) 2 Sheets—Sheet 2.

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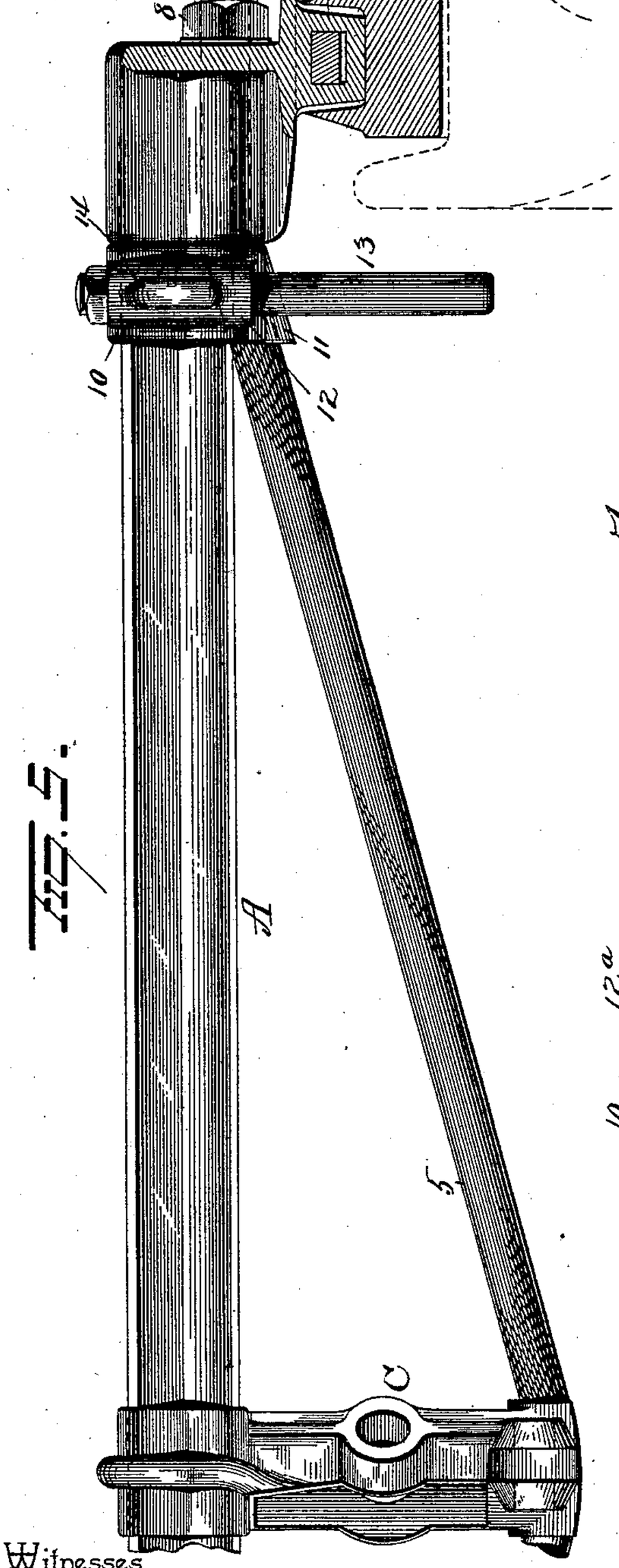

Fig. 5.

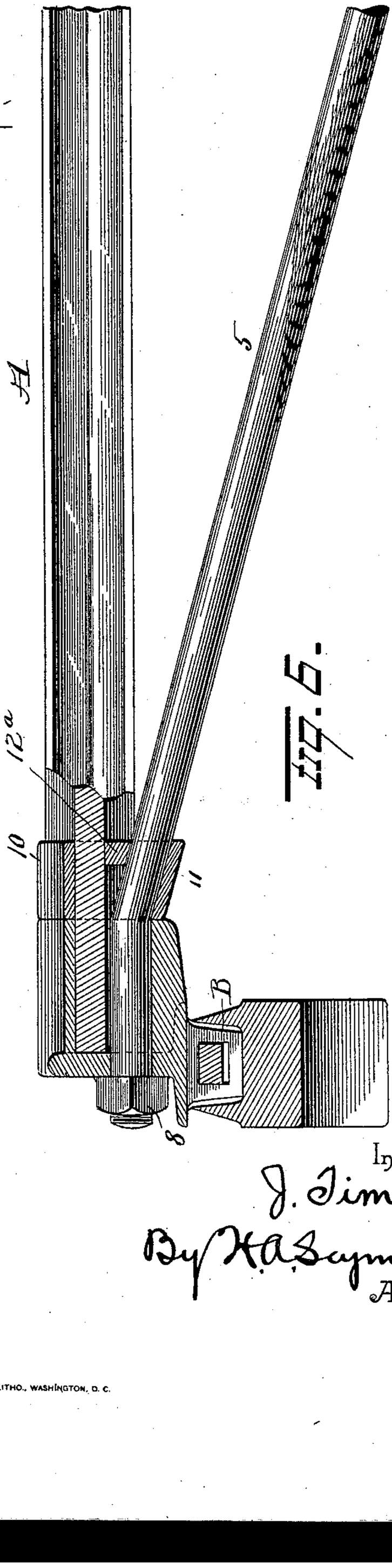

Fig. 6.

Witnesses
E. J. Nottingham
G. F. Downing.

Inventor
J. Timms
By H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

JAMES TIMMS, OF COLUMBUS, OHIO.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 587,071, dated July 27, 1897.

Application filed March 10, 1897. Serial No. 626,788. (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 Improvements in Brake-Beams; 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.

My invention relates to an improvement in brake-beams, the object being to attain strength and economy in construction and reduction in weight; and the invention consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a plan view of my improved beam. Fig. 2 is an enlarged section on line *x x* of Fig. 1. Fig. 3 is a similar view on line *y y*. Fig. 4 is a view on line *z z*. Figs. 5 and 6 are views representing the beam enlarged, one end being shown in one figure and the other end in the other.

A represents the beam. This is made of steel or iron in one straight continuous piece, which extends across from one brake-head to the other, and it may be star-shaped in cross-section, as shown in Figs. 1 and 2, or it might be triangular-shaped, as shown in the modification. The preferred construction is star-shaped, and in any event it is angular in cross-section, as shown in the different forms. In this way the bar is ribbed and given greater strength than it would have if perfectly round.

B is the brake-head, to which the shoe is attached. This is provided with a hole or socket 1, conforming in shape to the beam and extending but partly through the head. In this hole or socket the end of the beam is inserted. In consequence of the angular formation the possibility of the head turning with respect to the beam is precluded.

C is the strut bar or post. This is likewise provided with a hole or socket corresponding in shape to that of the beam, and the latter is forced through it to the center, where the strut remains.

The truss-rod 5 is bowed out at the center after the usual manner around the end of the strut-post, and its ends extend alongside the ends of the beam through one of the recesses formed between two ribs when the star-shaped beam is employed, as in Figs. 1 and 2, or flat against a face of the beam when shaped as shown in Fig. 5, and the ends are passed through holes 7 7 in the brake-heads. These holes 7 7 open into the sockets 1, and they extend entirely through the heads, and the ends of the truss-rods protrude through them. These protruding ends are screw-threaded, and nuts 8 8 are screwed tightly on them. In this manner the beam, truss-rod, and heads are all held rigidly together, as if in one single piece, and none of the parts are reduced in size, cut away, perforated, or weakened in any manner whatsoever. These brake-beams may of course be used inside or outside of the wheels. When located outside, the additional sleeve 10 is placed on each end of the beam immediately adjacent to the brake-head. The truss-rod also extends through this when it is used as shown at 11. A hole 12 is formed through this sleeve and a rod 13 extends through it.

It will be observed that the socket formed for the beam and the hole 11 are separated by a web 12^a of the casting at this point. This web separates the bar and truss-rod at this point and results in a more rigid connection. The function of these rods 13 is to prevent lateral swinging of the beam, they being located in position to strike the inner faces of the wheels. When the beams are used between the wheels, the rods 13 13 are unnecessary, because the support is such that no lateral movement of the beam is possible.

Both the heads and sleeves are furnished with loops 14 14, by means of which the brake mechanism is suspended from the car, the loops on the sleeves being provided more particularly for loose chains, the special object of which is to prevent the beam from dropping or dragging in the event of its breakage. The outer end of the strut is also connected with the car in the usual manner.

Beams of this construction can be made several pounds lighter than the standard weight prescribed. At the same time they are abundantly adequate in strength and their construction is economical.

It is evident that other slight changes

might be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

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

The combination with a flanged or star-shaped beam in cross-section, a strut-post having a hole therein corresponding in shape to the beam and adapted to receive the beam, sleeves having each a hole therein corresponding in shape to that of the beam and adapted to receive the beam of brake-heads, each having a socket therein adapted to receive ends of the beam, and a brace, each sleeve having a hole therethrough to receive the brace, with a web between said hole and the hole which receives the beam, and the brake-heads each having a hole therethrough alongside and communicating with the sockets, the brace extending on an incline through the holes in the sleeve and through the holes in the brake-heads parallel with and against the beam.

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

JAMES TIMMS.

Witnesses:
C. S. DRURY,
G. F. DOWNING.