No. 607,016. Patented July 12, 1898.

L. C. BURGESS.

BRAKE BEAM.

(No Model.) (Application filed Sept. 30, 1897.)

Fig. 1.

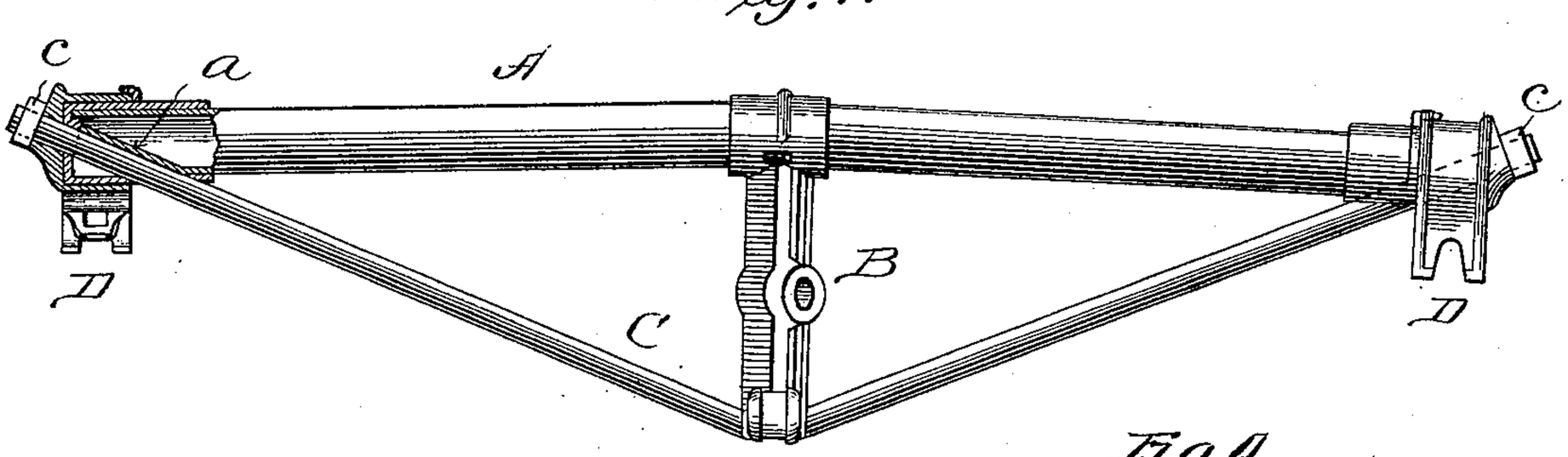


Fig. 2.

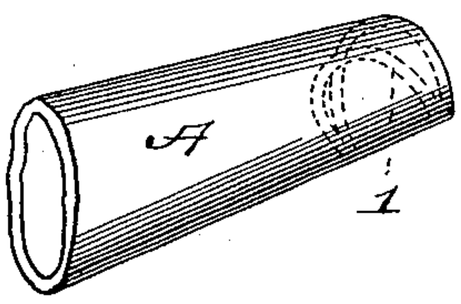


Fig. 3.

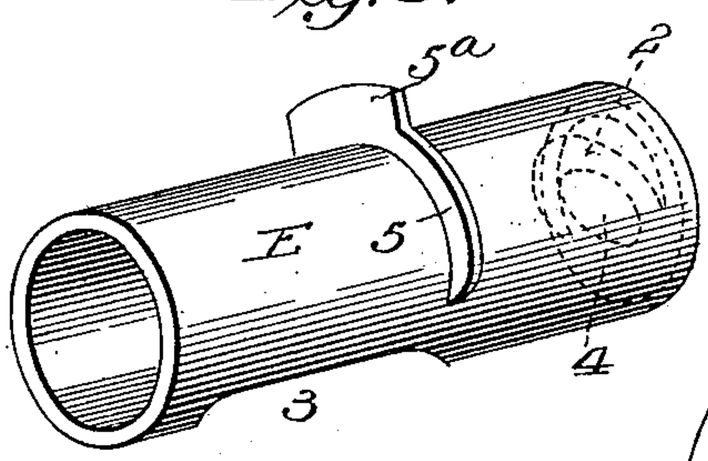


Fig. 4.

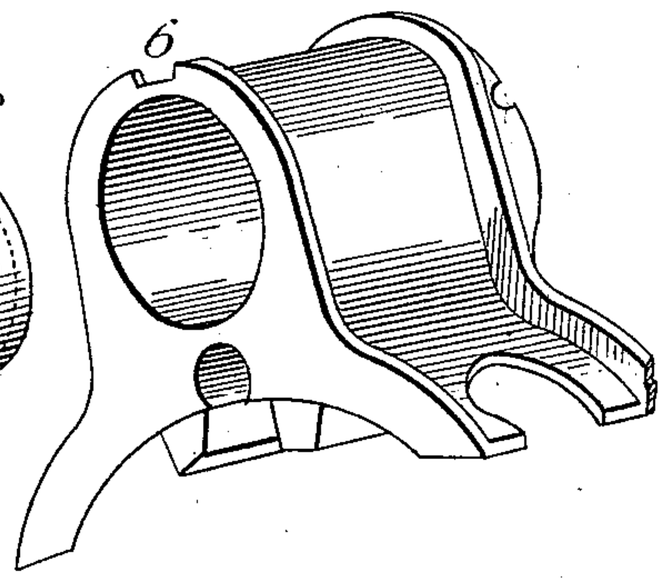
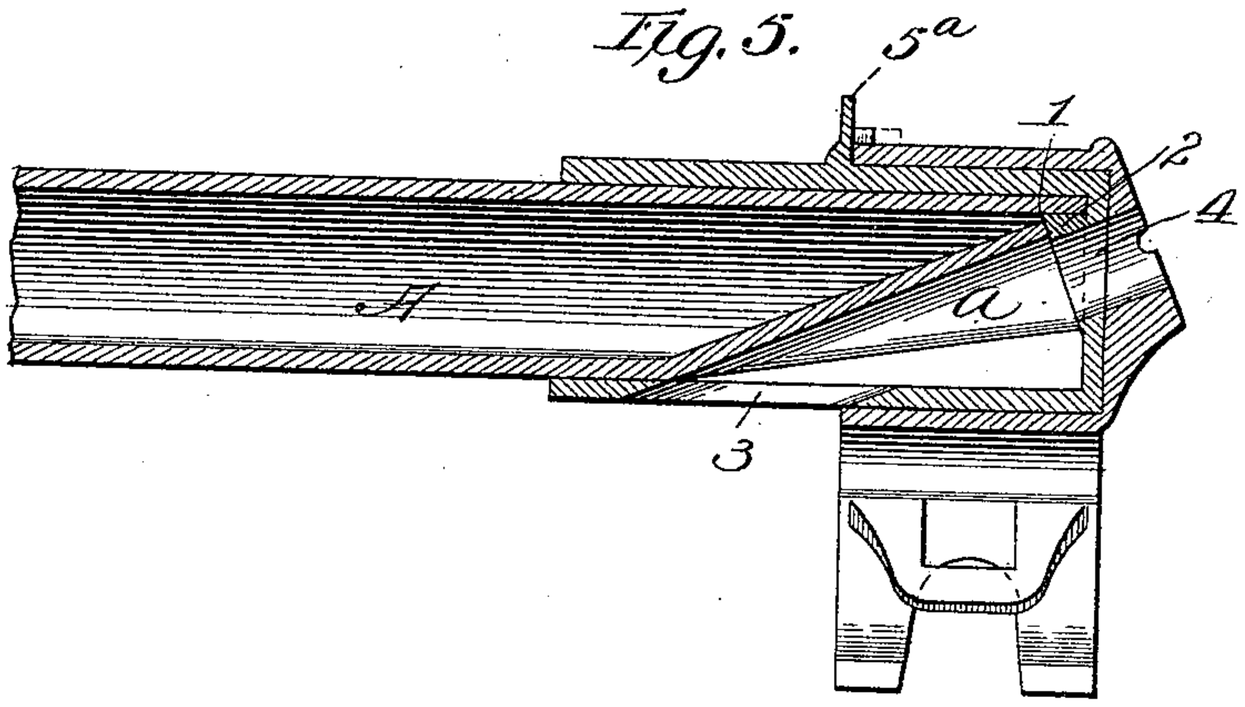


Fig. 5.



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LUTHER C. BURGESS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CHICAGO RAILWAY EQUIPMENT COMPANY, OF SAME PLACE.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 607,016, dated July 12, 1898.

Application filed September 30, 1897. Serial No. 653,639. (No model.)

To all whom it may concern:

Be it known that I, LUTHER C. BURGESS, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Brake-Beams; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a brake-beam, parts broken away to show the features of construction which embody my invention. Figs. 2, 3, and 4 are enlarged detached views of the end of a compression member, an end sleeve, and a brake-head, respectively, which embody my invention and are arranged in line to indicate the manner in which they are to be "set up" or combined; and Fig. 5 is an enlarged longitudinal sectional view of the said elements when combined or set up in the beam.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of trussed metallic brake-beams wherein are combined a tubular compression member, a strut or post, a tension member, and suitable brake-heads, and is directed more especially to that class in which the tubular compression member is indented or depressed at its ends to avoid slotting the member and to accommodate the ends of the tension member where they pass into the brake-heads.

The object of the present invention is to uniformly distribute the compressive or crushing force over or throughout the compression member of the structure and to transfer the torsional strains to the tension member.

In carrying out my invention I combine with the tension member and the compression member a cup or sleeve socket having on its interior an inclined "offset" or filler-block adapted to engage the reëntrant edge of the tubular compression member, and such a construction embodies one feature of my invention.

In order to give the brake-head the desired "throw"—that is to say, its position relative to the plane of the strut or post and tension-rod required by the height at which the beam is to be hung—I provide the sleeve and brake-head with a notch and engaging lug or tongue, whereby the head may be adjusted and secured in the predetermined position, and such a construction embodies a second feature of my invention.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the compression member, B the strut, C the tension member, and D D the brake-heads, of a trussed brake-beam, and *c c* the nuts or equivalent means for securing the several elements, taking the slack out of the beam, and, if desired, giving a camber to the compression member A. The compression member A, which is tubular, is swaged or indented at its ends to form channels or seats *a* for the reception of the ends of the tension member C where the same intersect the compression member A and pass into the brake-heads D D. This swaging or indentation of the periphery of the compression member A to form seats *a* for the tension-rod carries about one-half, more or less, of the end or edge of the tube within the line of normal cross-sectional contour, as at 1, and such edge I term the "reëntrant" edge, and upon such edge the usual brake-head will have no bearing.

To obtain uniform end bearing between the brake-heads D D and the compression member A, I provide a suitable cup or sleeve E, having on its interior an inclined offset, filler-block 2, or projection whose bearing-face when in position engages the reëntrant edge 1 of the compression member A, and is in a plane at substantially right angles to the axis of the tension member C where the same passes into the brake-head D, and said sleeve E, if of such length as to require it, is slotted, as at 3, for the entrance of the tension-rod C, and will be perforated diagonally, as at 4, for the exit thereof. Upon the exterior of sleeve E is a flange or partial collar 5, which serves as a shoulder against which the inner edge of the brake-head D abuts or rests when said head is in position on the beam, and the cen-

tral portion of said flange or partial collar 5 for a considerable distance, as at 5^a, is of such width that it (or a portion of it) can be turned over and down on the brake-head D to form a tongue to engage a notch in the brake-head.

D indicates a brake-head which may be of the usual pattern, with the exception that at the back and centrally it will be provided with a notch or recess for the reception of such portion of the flange 5^a as may constitute a tongue and be turned down into said notch when the brake-head has been applied and adjusted.

The construction of the several parts being of the general character hereinbefore pointed out, they will be combined or set up to constitute a beam as follows: The strut or post B is first applied to the compression member A, then the end cups or sleeves E are applied, so that the filler-blocks or offsets 2 2 engage or bear on the reëntrant edges 1 1 of the compression member A, and the slots 3 3 of the sleeves register with the indentations or depressions *a a* of the compression member A, after which the ends of the tension-rod may be passed through the sleeve, the brake-heads D D applied, and the nuts *c c* screwed on to secure the parts together. When this has been done, (or before, if preferred, and the proper calculation has been made,) the brake-head is given the desired position or "throw" to suit the height at which the beam is to be hung, and that portion of flange 5^a opposite the notch 6 when the brake-head is in the desired position is turned or driven down into the notch 6, and the brake-head is thereby fixed at the desired throw.

It will be perfectly evident to one skilled in the art or to the ordinary mechanic that the notch 6 and flange 5^a or locking-tongue may be reversely located, if desired; but as a collar or partial collar 5 is desirable on the sleeve E as a bearing for the head D it is more convenient to extend the same, as at 5^a, and to thus obtain the tongue to engage in the notch 6.

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

1. In a trussed brake-beam, the combination with a tubular compression member having an indentation for the reception of the tension member and a reëntrant edge formed by said indentation, of an end cup or sleeve provided with an inclined offset or filler-block adapted to engage the reëntrant edge of the compression member, and a suitable tension member, substantially as and for the purposes specified.

2. In a trussed brake-beam, the combination with a compression member, and a tension member, of an end sleeve, and a brake-head, said sleeve and head having the one a notch and the other a flange of greater width than the notch whereby that portion of the flange opposite the notch when the throw of the head is established may be forced into the notch to maintain the throw of the brake-head, substantially as and for the purposes specified.

3. In a trussed brake-beam, the combination of a tubular compression member having an indentation for the reception of the end of a tension member, a tension member, an end cup or sleeve having a filler-block to engage the reëntrant edge of the compression member and a tongue to engage a notch in the brake-head, and a brake-head having a notch with which the tongue on the end sleeve engages; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 27th day of September, 1897.

LUTHER C. BURGESS.

Witnesses:

E. T. WALKER,

C. FRANK HUNTOON.