No. 687,955. Patented Dec. 3, 1901.

F. K. FASSETT.

BRAKE BEAM.

(Application filed July 22, 1901.)

(No Model.)

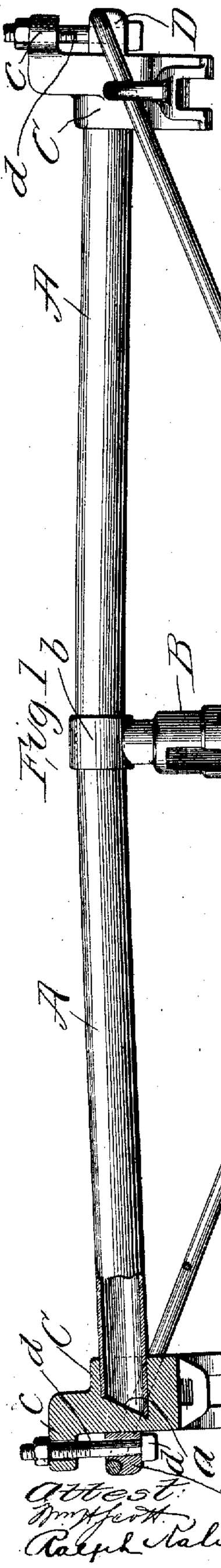

Fig. 1.

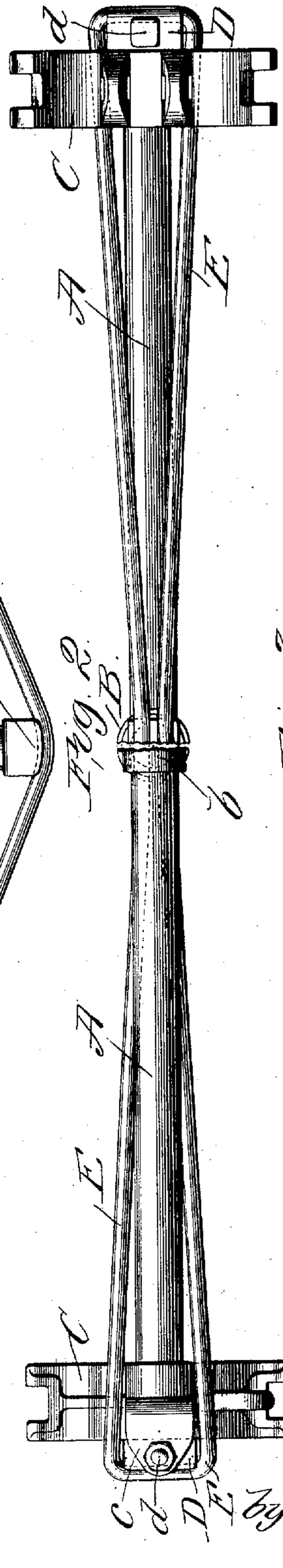

Fig. 2.

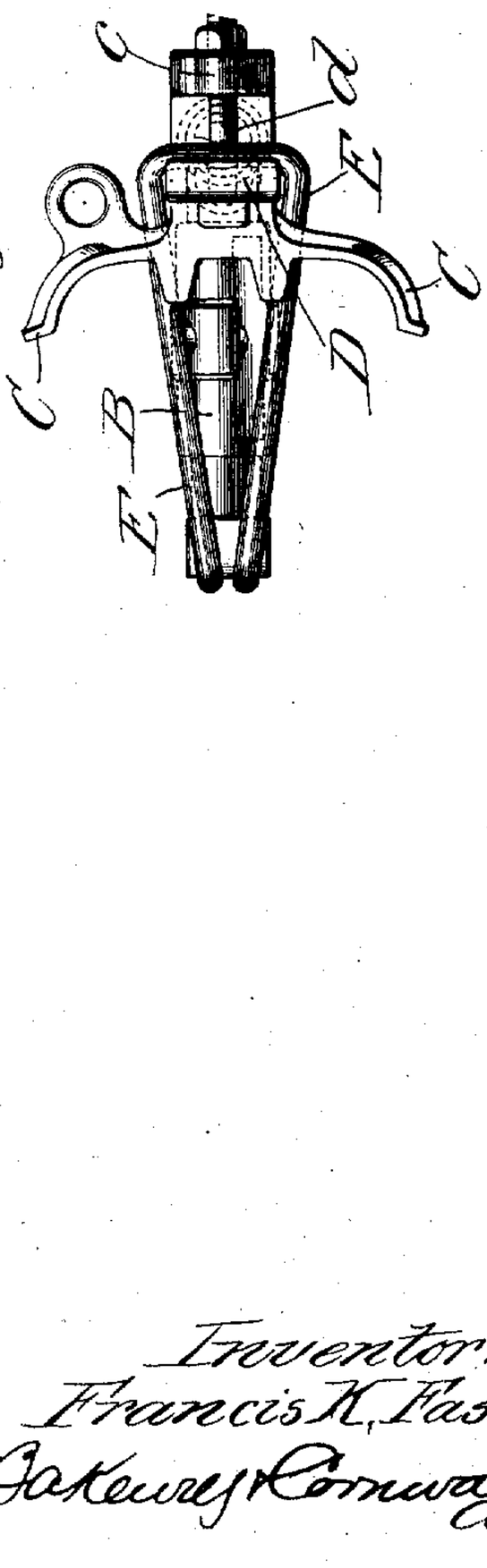

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANCIS K. FASSETT, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CHICAGO RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 687,955, dated December 3, 1901.

Application filed July 22, 1901. Serial No. 69,258. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS K. FASSETT, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Brake-Beams, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my improved brake-beam, one end thereof being shown in section. Fig. 2 is an elevational view, the left-hand half of said figure being a rear elevational view and the right-hand half of said figure being a front elevational view. Fig. 3 is an end elevational view of my improved brake-beam.

This invention relates to a new and useful improvement in brake-beams of that type known as "trussed" brake-beams.

My improved brake-beam comprehends the use of a compression member, preferably in the form of a tube, a strut located about the middle of said compression member, said strut being provided with an opening for receiving a brake-lever, and a tension member in the form of a continuous looped rod, the bent ends thereof engaging movable blocks arranged exteriorly the brake-heads. Means are provided for adjusting the blocks along the brake-heads, whereby tension may be placed in the tension-rod and a camber produced in the compression member, so that the beam is resilient to the extent that suddenly-applied loads will not permanently set the beams.

The object of this invention is to simplify the construction of a beam of the character described, enabling the parts to be easily assembled, which will permit of repairs being easily and quickly made.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings, A indicates the tubular compression member, which is preferably in the form of a wrought-iron pipe or pipe of other material, the ends of said pipe being inclined or beveled, as shown at *a*.

B represents the strut formed with an eye *b* at its rear end, through which the compression member passes. This strut receives the brake-lever, as is well understood. The outer end of strut B is provided with recesses or seats for the tension-rod, as shown.

C indicates the brake-heads, whose front faces are of usual construction, said brake-head being provided with a socket or seat whose bottom walls are inclined, so as to coöperate with the inclined or beveled ends of the compression member. By this construction it will be observed that when the brake-head is seated on the end of the compression member the beveled ends of the latter engaging the bottom walls of the heads will prevent said heads from turning when the heads are seated home. In fact the heads have no inclination to turn, as the connection therebetween and the compression member is such that the heads are centered in their position. Extending rearwardly from the brake-heads are lugs *c*, which lugs are preferably perforated for the passage of a bolt *d*. This bolt passes through an opening in a sliding block, which block forms a saddle for the end of the tension member. Bolt *d* is provided with a nut on its rear end, which impinges against the lugs *c*. The head of the bolt is preferably square and is so arranged that when in position it is prevented from turning by the side face of the brake-head.

E indicates the tension member, which is preferably in the form of a continuous rod, the ends thereof being bent and seated in the saddle-blocks D. The side members of this tension member pass on each side, or rather above and below, the brake-heads, said side members converging toward and being seated in the grooves in the end of strut B. It will be noticed that the beveled ends of the compression member are substantially at right angles to the plane or axis of the tension member and that the outer side faces of the brake-

heads are at right angles to the plane or axis of the compression member. By this construction when the bolts *d* are tightened the saddle-blocks D are pulled rearwardly and, being guided by the outer faces of the brake-heads, will travel in paths tangential to the arc movement of the outer ends of the tension member which are described from the end of the strut. The rearward movement of the saddle-blocks will draw the bent ends of the tension member rearwardly and force the brake-heads against the ends of the compression member. At the same time the compression member will be pulled forwardly, producing a bend or camber therein. As much tension may be placed in the tension member, and consequently as much camber may be imparted to the compression member, as desired. The inclined or beveled ends of the compression member tend at all times to seat the brake-heads firmly in position, and as the inclined ends of the compression member are substantially at right angles to the direction of pull or strain in the tension-rods it is obvious that the brake-heads have no tendency to leave their home position.

It will of course be understood that nut-locks may be provided on the ends of the bolts *d*, if desired. By providing nut-locks the compression member can be cambered, and when once adjusted it is ready to be placed in service, and any tampering with nuts on the ends of the bolts *d* will be noticeable by observing the condition of the nut-locks. In addition to this these nut-locks serve as means for locking the saddle-blocks in position and preserving the original camber in the beam. This tension member, as above described, is in the form of a continuous rod lying entirely on one side and in front of the compression member. So far as I am aware I am the first to employ a tension member in the form of a continuous rod, the ends thereof being bent around the saddle-blocks movable on the outer faces of the brake-heads, and to provide means for adjusting the saddle-blocks—that is, moving the saddle-blocks rearwardly—whereby tension may be placed in the tension member and the compression member cambered.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my invention may be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. A brake-beam of the character described, comprising a compression member, a strut, a tension member, said tension member being in the form of a looped rod, lying wholly on one side of the compression member, and means for effecting a relative movement between the ends of the compression member, and the looped ends of the tension member; substantially as described.

2. The combination with a compression member, of a strut and a tension member in the form of a continuous rod bent around the brake-heads on the ends of the compression member, and saddle-blocks bearing against the brake-heads and movable independently thereof; substantially as described.

3. The combination with a compression member having beveled ends, of brake-heads mounted upon the ends of said compression member, a strut, and a tension member; substantially as described.

4. In a trussed brake-beam, the combination with a tubular compression member, formed with beveled ends, of brake-heads, provided with sockets for receiving the ends of the compression member, the bottom walls of said sockets being inclined to coöperate with the beveled ends of the compression member, a strut, and a tension member, substantially as described.

5. In a brake-beam, the combination with a compression member, of a strut, and a tension member formed of a continuous rod looped around the brake-heads on the ends of the compression member, said rod converging at its middle portion and being seated in grooves in the end of the strut; substantially as described.

6. The combination with a compression member, of a strut, and a tension member, said tension member being in the form of a continuous rod looped around the brake-heads, and saddle-blocks bearing against the outer faces of the brake-heads, and movable independently thereof, said saddle-blocks receiving the bent ends of the tension member; substantially as described.

7. In a brake-beam, the combination with a compression member, of a strut, and a tension member, brake-heads on the ends of the compression member, blocks movable along the outer faces of said brake-heads, the ends of said tension member being secured to said blocks, and means for moving the said blocks along the faces of the brake-heads and locking them in adjusted positions; substantially as described.

8. In a brake-beam, the combination with a compression member, of a strut, brake-heads on the ends of the compression member, said brake-heads being provided with seats on their outer faces for receiving movable blocks, movable blocks seated against the outer faces of said brake-heads, a tension-rod secured to said movable blocks, and seated on the end of the strut, means for moving said blocks along the outer faces of the brake-heads, and devices for locking said blocks in adjusted positions, whereby, tension may be placed in the tension-rod, and the compression member cambered; substantially as described.

9. In a brake-beam, the combination with a tubular compression member A, having its

ends beveled or inclined, of brake-heads mounted on the ends of said compression member, a strut, a tension member, in the form of a continuous looped rod whose ends are bent around the brake-heads, saddle-blocks D receiving the bent ends of the tension member, said saddle-blocks being movable along the faces of the brake-heads, and nuts or bolts *d* engaging said saddle-blocks and said brake-heads; substantially as described.

10. The combination with a compression member having brake-heads arranged on its ends, of a strut, a tension member, saddle-blocks movable independently of the brake-heads and in a direction tangential to the arc movement of the ends of the tension member, and means for adjusting said saddle-blocks and locking them in adjusted positions; substantially as described.

11. In a brake-beam, the combination with a tubular compression member, of a strut slotted to receive the brake-lever, the end of said strut having seats, brake-heads on the ends of the tubular compression member, and a tension member in the form of a continuous rod bent around the brake-heads and having the middle portions thereof seated in the end of the strut; substantially as described.

12. In a brake-beam, the combination with a compression member, of a strut provided with grooves in its outer end, brake-heads at the end of the compression member for taking the end thrust thereof, a tension member in the form of a continuous rod looped around the brake-heads and having its middle portions seated in the grooves in the end of the strut, and means for moving the looped ends of the tension member past the axis of the compression member; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 20th day of July, 1901.

FRANCIS K. FASSETT.

Witnesses:
GEORGE BAKEWELL,
RALPH KALISH.