

No. 828,369.

PATENTED AUG. 14, 1906.

C. E. BAUER.
BRAKE BEAM FULCRUM.
APPLICATION FILED APR. 11, 1906.

Fig. 1.

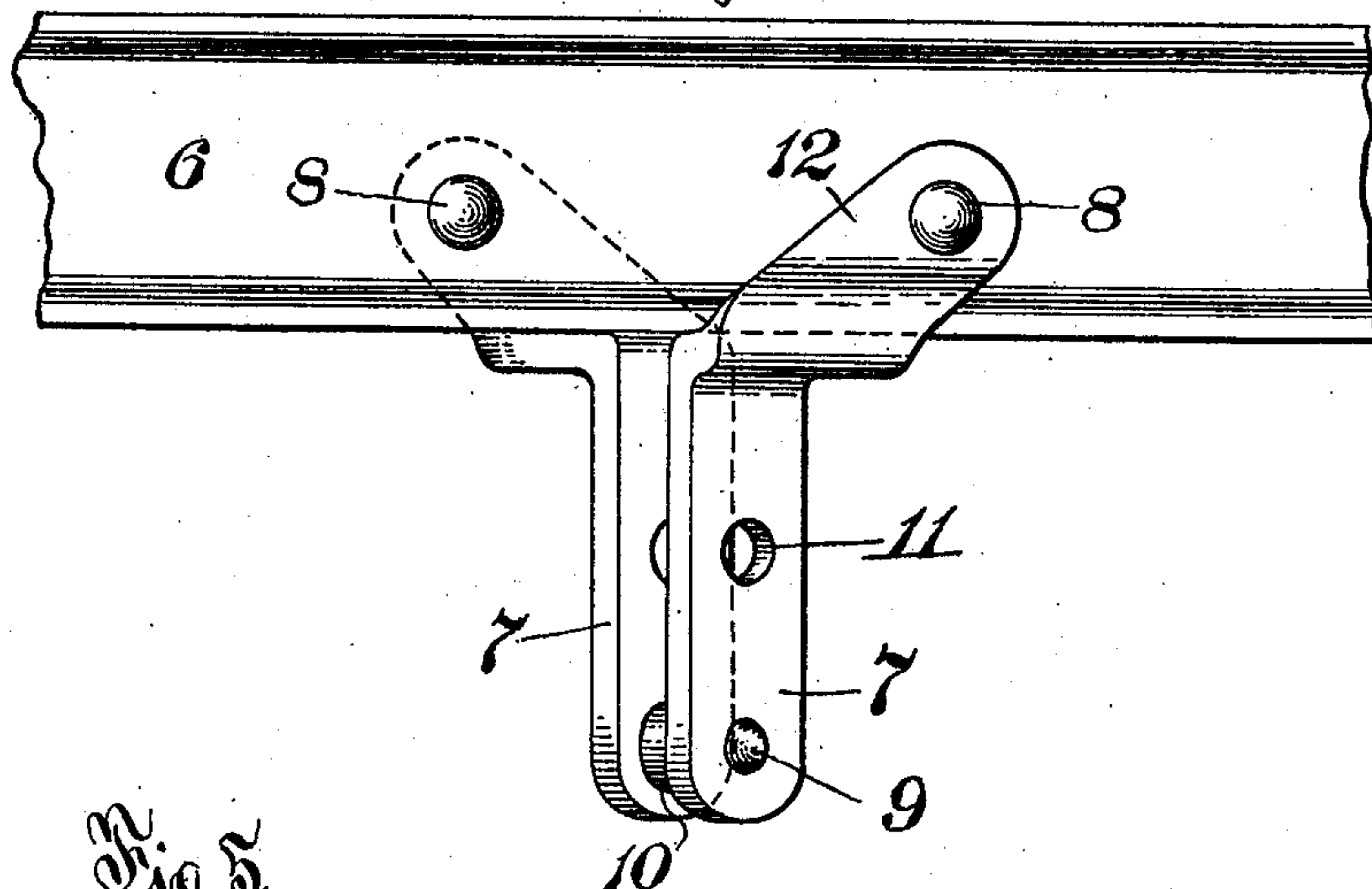


Fig. 5.

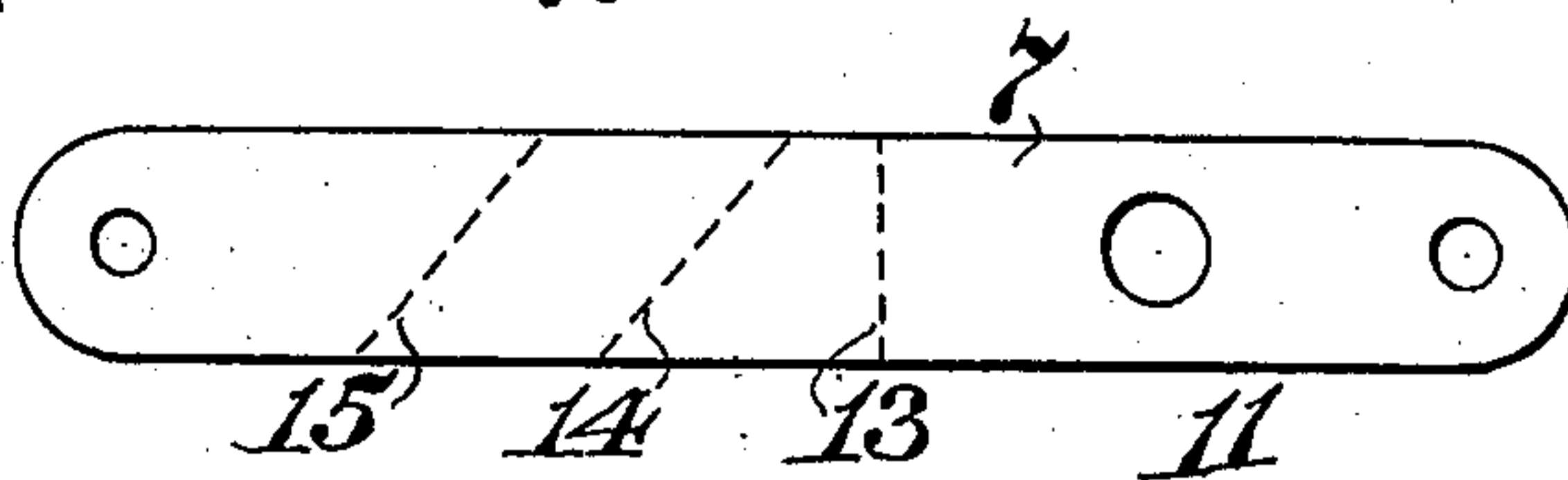


Fig. 2.

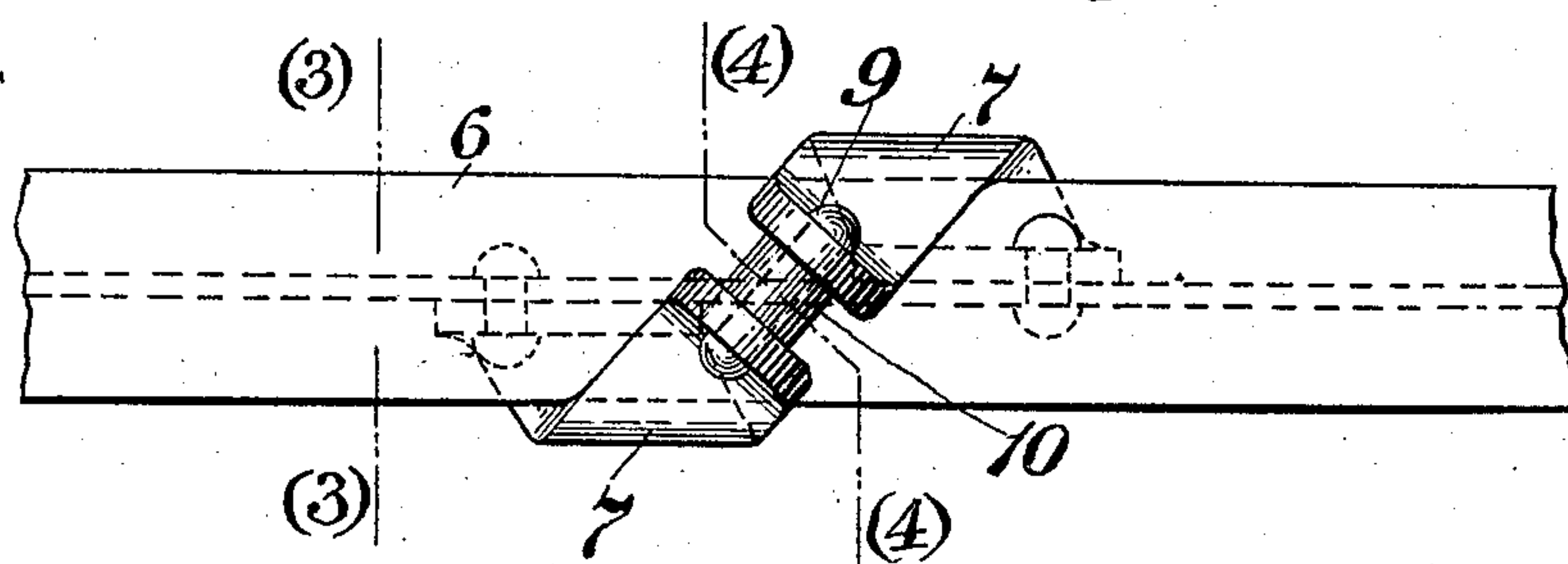


Fig. 3.

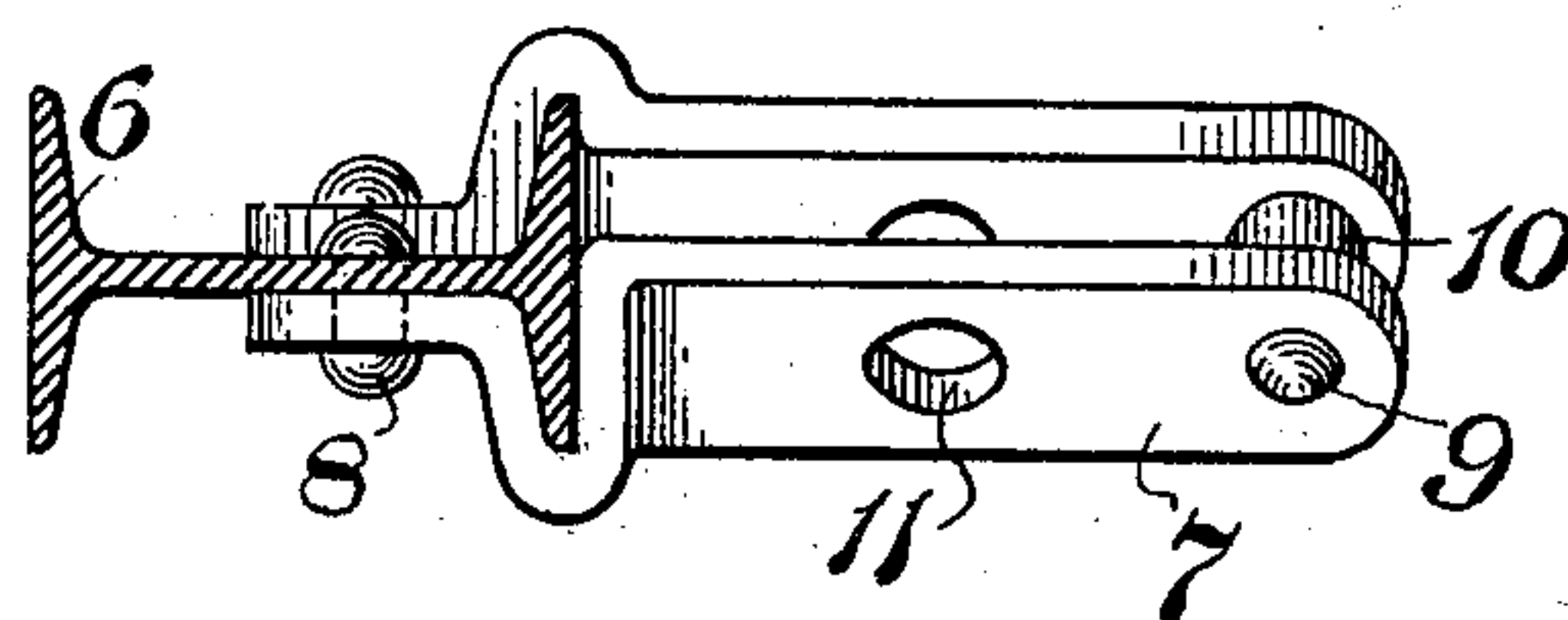
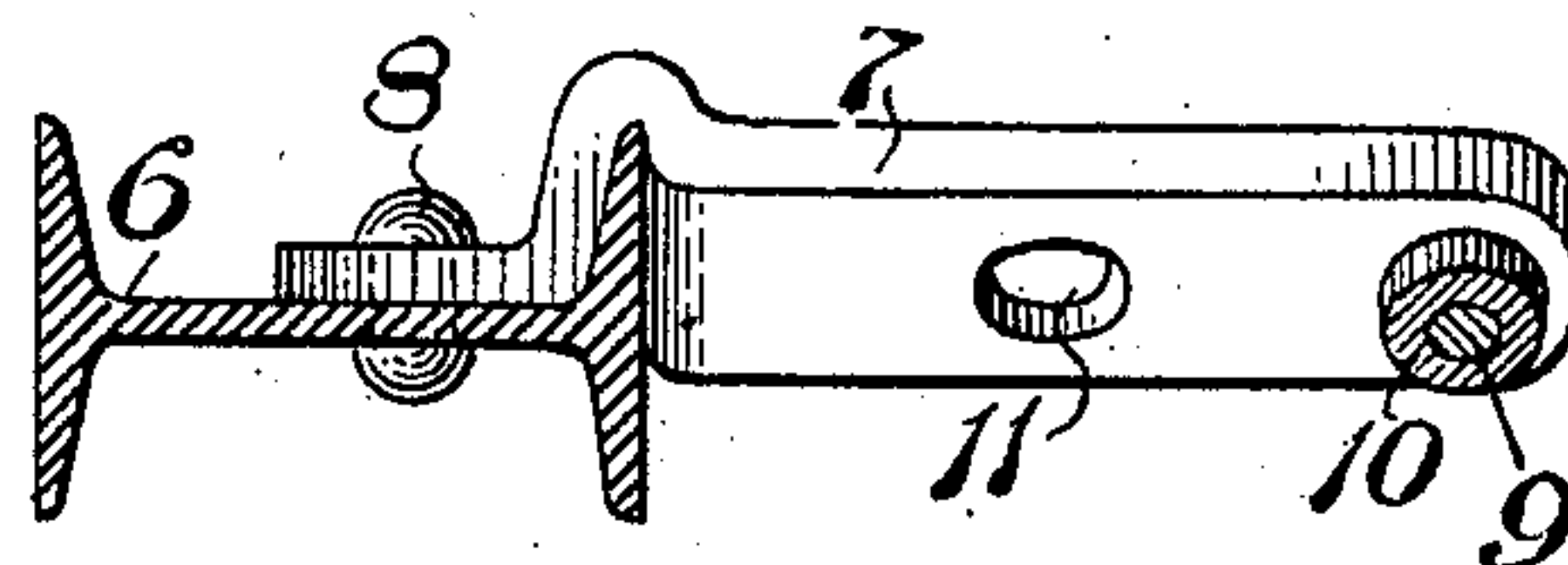


Fig. 4.



WITNESSES

J. C. Bradley
A. E. Gaither.

INVENTOR

Karl E. Bauer
by attys
Symon & Carpenter

UNITED STATES PATENT OFFICE.

CARL EDWARD BAUER, OF HAMMOND, INDIANA, ASSIGNOR TO SIMPLEX RAILWAY APPLIANCE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BRAKE-BEAM FULCRUM.

No. 828,369.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed April 11, 1906. Serial No. 311,154.

To all whom it may concern:

Be it known that I, CARL EDWARD BAUER, a citizen of the United States, residing at Hammond, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Brake-Beam Fulcrums, of which the following is a specification.

The invention relates to two-piece fulcrums for flanged brake beams, and has for its objects; to provide a malleable fulcrum of this character which may be very easily forged with a minimum number of operations; to provide a fulcrum in the production of which no offsetting of the bar stock edgewise is necessary and in which production there is no stretching and thinning of the metal in forming the upper part of the members to fit the flanged beam, and to provide a fulcrum in which a very rigid and secure fastening to the beam is obtained. The invention in its preferred form is illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation showing the fulcrum in place on the beam;

Figure 2 is a bottom view of the beam showing the fulcrum thereon;

Figure 3 is a transverse section on the line (3) (3) of Figure 2;

Figure 4 is a transverse section on the line (4) (4) of Figure 2, and

Figure 5 is a plan view of the blank bar from which the fulcrum is formed, in which the dotted lines indicate the points of bending.

It has been heretofore common to forge two-piece fulcrums for flanged brake beams from flat bar stock, but in all such constructions in so far as I am aware, the upper ends of the two members have been bent so as to come opposite each other on the beam, and be held by a through bolt or rivet. Because of the obliquity of the flat depending faces necessitated by the brake lever being at an angle to the axis of the beam, it has been necessary in the construction above referred to, in which the upper fulcrums ends are brought opposite each other, either to offset the bar stock edgewise, or else stretch one side of the bar, thereby thinning and weakening the metal in order to make the members properly embrace the beam flange and come exactly opposite each other. The stretching of the metal is undesirable because it weakens the

bar at the point of thinning, and the provision of offsetting the bar edgewise is objectionable because of the extra labor involved in the operation. These objections are avoided in my fulcrum by bending the upper end of the fulcrum members diagonally of the beam, thereby making them non opposite. This construction also makes a more effective securing of the fulcrum to the beam.

As shown in the drawings, 6 is the flanged brake beam, 7 are the fulcrum members secured to the beam 6 by the rivets 8 at the upper ends of such members, and secured together at the bottom by the rivet 9, and 10 is the spacing sleeve fitting over the rivet 9. The usual holes 11 are provided for the axis of the brake lever. As the brake lever is necessarily at an angle to the brake beam 6, the faces of the depending portion of the fulcrum members are oblique to the axis of the beam. The upper ends of the fulcrum members are spaced to fit around the flange of the brake beam as indicated in the drawing, and are extended diagonally of the web of the beam as most clearly shown in Figure 1. By spacing the upper ends 12 of the opposing fulcrum members apart in the manner indicated, I extend the securing face of the fulcrum, making it equal to the distance between the two rivets 8 and a strong holding means is provided. It will be obvious from inspection that a fastening of this kind will much more effectively resist a strain directed longitudinally of the brake beam than will the old form of fastening in which the two ends are opposite each other and are secured by a single rivet. The advantage of my device from a constructive standpoint will be apparent by reference to Figure 5, which indicates by the dotted lines the points at which bending is necessary. Only three bends are necessary, and these bends are as indicated in Figure 5—a straight bend at 13 and diagonal bends at 14 and 15 respectively. The bends 13 and 14 are the ones for carrying the member around the flange of the beam, while the bend at 15 is the one directing the part 12 diagonally of the web of the beam. It will be seen that none of the bends formed are compound, and they are therefore easy to make, and there is no stretching and consequent thinning of the metal at the point of bending. The thickness of the member after it has been completed is substantially the same throughout

its length, and there are no thinned weak places as in the ordinary forged fulcrum member. As stated in the foregoing my fulcrum is very easily made, and when completed the members are of uniform strength, and furthermore when secured to the beam the attachment is very rigid and secure.

Having thus described my invention and illustrated its use, what I claim as new, and desire to secure by Letters Patent, is the following:

1. A two-piece fulcrum for a flanged brake beam comprising similar malleable members with the faces of the depending ends oblique to the axis of the beam, and their upper ends shaped to embrace the flange of the brake beam and extending diagonally of the web of the beam in opposite directions.

2. A two-piece fulcrum for a flanged brake beam comprising similar malleable members with the depending ends secured together and formed with a lever axis oblique to the axis of the beam, and having their upper ends shaped to embrace the flange of the brake

beam and extending diagonally of the web of the beam in opposite directions.

3. A two-piece fulcrum for a flanged brake beam comprising flat forged steel bars with their depending ends provided with a lever fulcrum at an acute angle to the axis of the beam and their upper ends shaped to embrace the flange of the brake beam and extending diagonally of the web of the beam in opposite directions.

4. A two-piece fulcrum for a flanged brake beam comprising flat malleable members with the faces of the depending ends oblique to the axis of the beam and their upper ends shaped to embrace the flange of the brake beam and extending diagonally of the web of the beam in opposite directions.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

CARL EDWARD BAUER.

Witnesses:

PAUL CARPENTER,
ALBERT GRANT MILLER.