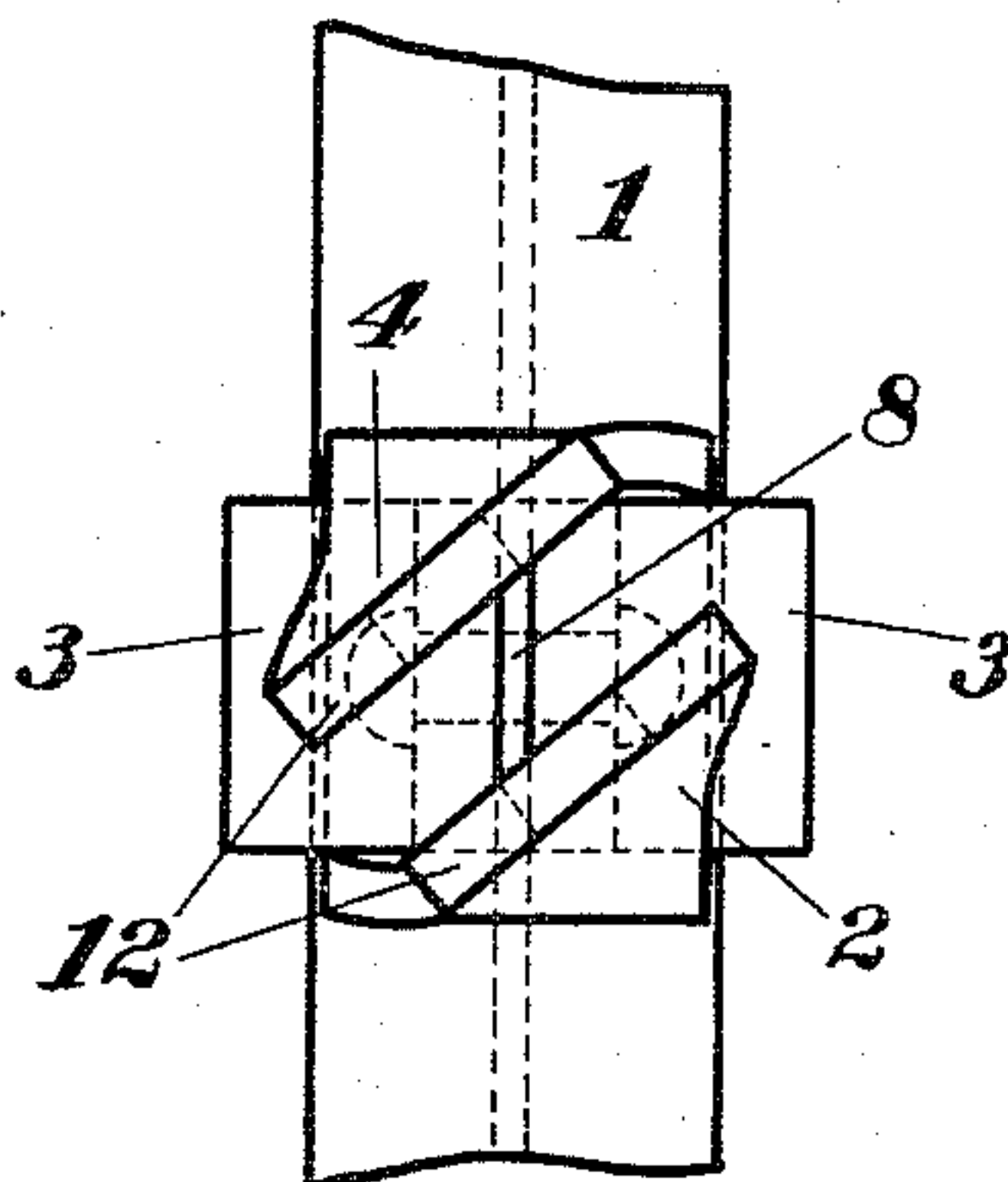


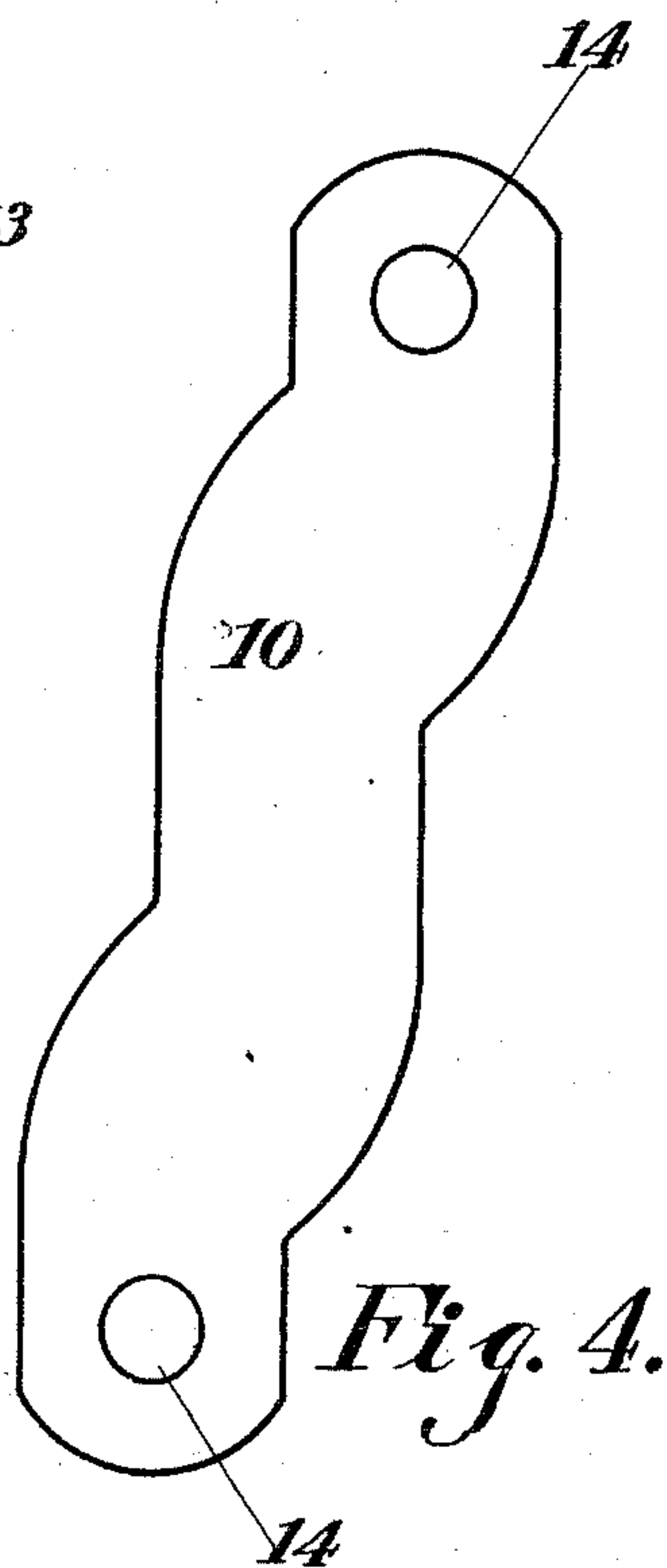
N. S. REEDER.  
BRAKE BEAM FULCRUM.  
APPLICATION FILED AUG. 16, 1910.

995,181.

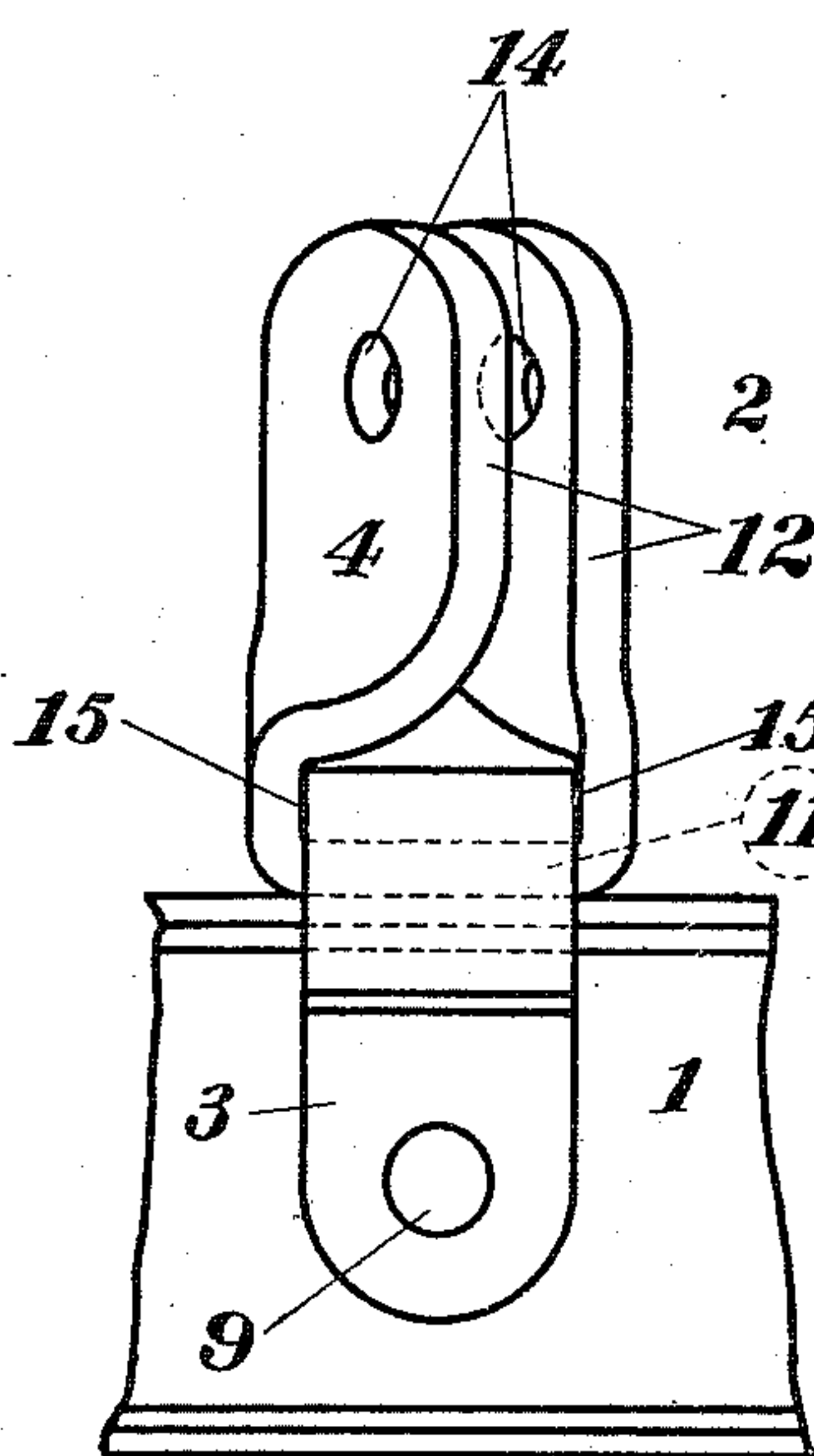
Patented June 13, 1911.



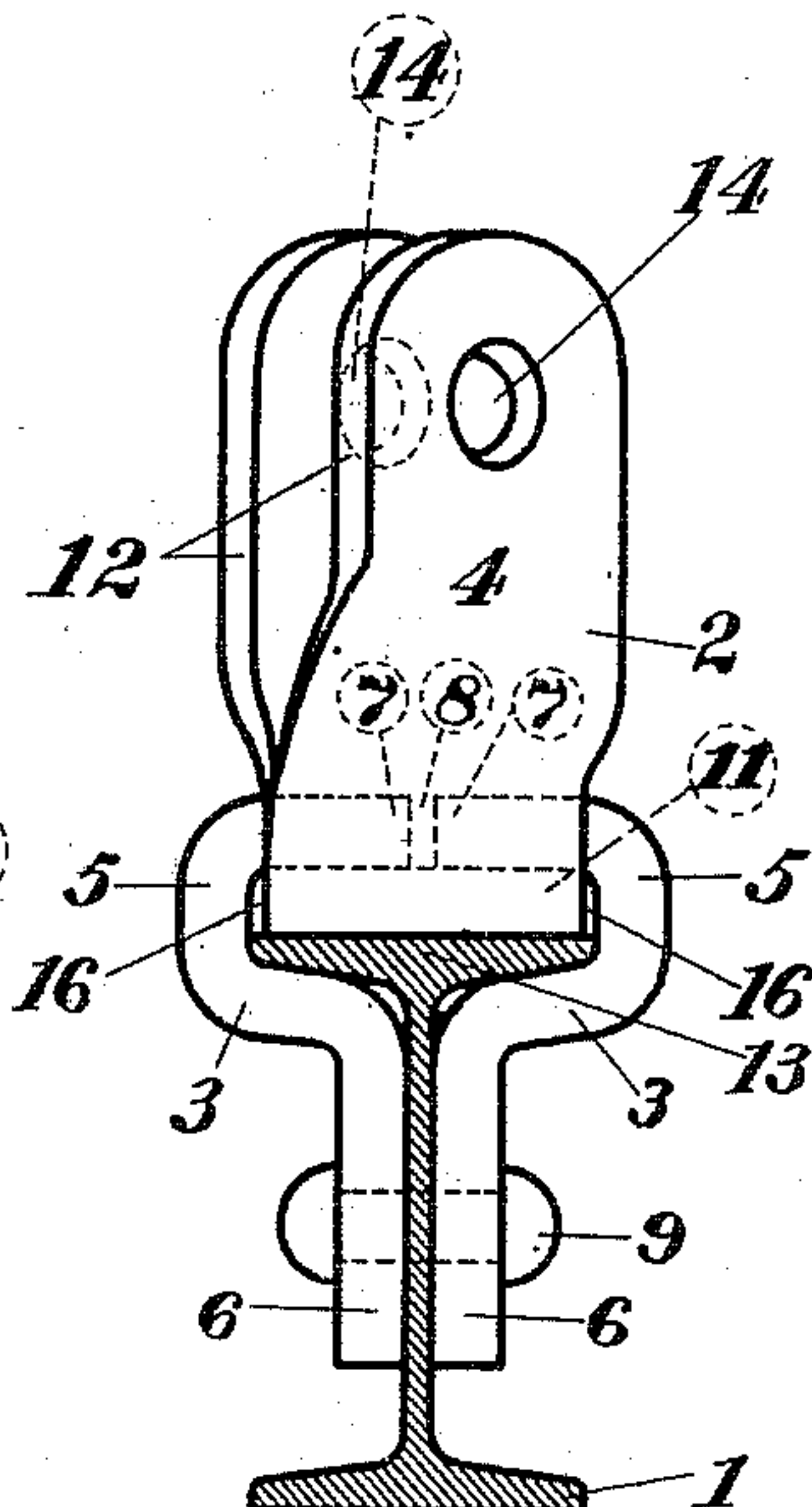
*Fig. 3.*



*Fig. 4.*



*Fig. 1.*



*Fig. 2.*

Witnesses  
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# UNITED STATES PATENT OFFICE.

NATHANIEL S. REEDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO PRESSED STEEL CAR COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

## BRAKE-BEAM FULCRUM.

995,181.

Specification of Letters Patent. Patented June 13, 1911.

Application filed August 16, 1910. Serial No. 577,481.

*To all whom it may concern:*

Be it known that I, NATHANIEL S. REEDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Brake-Beam Fulcrums, of which the following is a specification.

The invention relates to improvements in brake beams for railway cars and it consists in the novel features and construction hereinafter described and particularly pointed out in the claims.

Brake beams of the class to which my invention pertains comprise a rolled body beam of suitable length, brake heads of suitable construction attached to the ends thereof, and a fulcrum for the brake lever; and my invention has for its object to produce a novel fulcrum for use in such beams, said fulcrum being efficient and capable of being quickly and securely applied to the brake beam.

A further object of my present invention is to produce a novel forged metal fulcrum having its parts bent into the required shape, the parts of the fulcrum while being given such shape not being materially stretched or weakened, my invention contemplating the manufacture of the fulcrum in three separate parts without, during the bending operations, stretching or in any way weakening the same.

The invention will be fully understood from the following detailed description, reference being made to the accompanying drawings in the several figures of which like parts are similarly designated, in which—

Figure 1 is a plan view of the fulcrum and portion of the brake beam; Fig. 2 is a transverse section through a brake beam having the fulcrum applied thereto, the fulcrum being shown in elevation; Fig. 3 is an outer end view of the complete fulcrum taken from the upper end of Fig. 2; Fig. 4 is a development of a blank used in making the jaw member.

In the drawings, 1 designates a portion of the usual body beam and 2 the novel fulcrum of my invention which is applied centrally on one edge of the beam, and comprises a pair of beam members 3, 3 also a lever or jaw member 4 formed of an integral piece of forged or rolled metal folded at about its middle portion. The complete beam member is composed of two separate members

3—3 which are each formed of initially straight bars of forged or rolled metal, one end of each of said bars being bent to form hooks 5, 5 to engage the central portion 11 of the jaw member 4, and also one edge of the flange of the body beam, the other end 6 being bent back in the opposite direction so as to be parallel and in contact with the web of the body beam.

Two of the above described members 3, 3 are used to form the complete beam member for securing jaw member 4 to the body member 1, the ends 7, 7 of the hooked members being straight and of such a length that a slight space or clearance 8 remains between them, the other ends being secured to the web of the body beam by a rivet or the other suitable securing means 9. The formation of the beam member in two parts 3—3 is advantageous because these can, in case of repair or replacement, be applied directly to the body beam without the necessity of removing the brake heads at one end of the beam, as is necessary in the replacement of a one-piece body beam member or a brake beam fulcrum in which the body member and jaw member are integral. The above described formation of the parts comprising the body beam member is further advantageous because of the alinement with each other of the parts of the beam member 6, whereby only one rivet or other securing means is required for fastening said member to the body beam, and also from the fact that the particular formation of the parts 3—3, composing the body beam member, are conveniently produced without unduly stretching or weakening the metal, which is one of the prime objects accomplished by my invention.

The jaw member 4 is formed from a blank 10 shown in Fig. 4, folded at about its middle portion to form a straight section 11 and side sections or members 12, these latter being diagonally disposed with respect to the straight section 11, and at their outer ends being sufficiently separated from each other to properly receive between them the brake lever. The straight section 11 is long enough to admit, without any substantial clearance, the ends 7—7 of the body beam members 3—3, and is of a width approximately equal to the width of the flange 13 of the body beam. From the edges of section 11 the sides 12 are bent inwardly and at an angle



with the straight section 11, and then extend in parallel lines as shown in Figs. 1 and 2. It will be observed that the jaw member 4 is formed to produce the angularly disposed sides 12—12 from a special shaped blank Fig. 4 by a combined bending and twisting operation, which latter is so slight as not to unduly weaken or stretch the metal. Sides 12—12 of the jaw member 4 receive between them the usual brake lever (not shown), said lever being usually mounted upon a pin extending through the perforations 14, 14 in the sides 12—12 of said member 4, such perforations being usually made in the blank, (Fig. 4) prior to the bending and twisting operation above referred to.

The jaw member 4 is applied and secured to the body beam 1 by means of the two hooked body beam members 3—3, which are secured to the body beam 1 by a rivet 9 extending through the web of the body beam and the ends of the body beam members 3—3, whereby the members 3—3 are enabled to secure jaw members 4 in position the section 11 of the jaw member being confined between the flanges of the body beam and the straight ends 7—7 of the beam members 3—3. Movement of the jaw member 4 is further prevented by reason of the contact of the edges of the straight ends 7—7 of the body beam members 3—3 with the upwardly extending portions of the member 4 at the points designated 15—15, Fig. 1, and also by reason of the contact with the edges of the straight portions 11 of the jaw member 4 with the hooked portions of the body member 3—3 at points designated 16—16, Fig. 2, thus effectually preventing any turning or swiveling of member 4 when in actual use.

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

1. A brake-beam fulcrum comprising an angularly disposed jaw member, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

2. A brake-beam fulcrum of forged metal comprising an angularly disposed jaw member, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

3. A brake-beam fulcrum comprising a jaw member having angularly disposed sides, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

4. A brake-beam fulcrum of forged metal comprising a jaw member having angularly disposed sides, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

5. A brake-beam fulcrum comprising a jaw member of one integral piece of forged metal folded at its center and forming angularly disposed sides, and two separate beam members for securing the jaw members to the beam, substantially as described.

6. A brake-beam fulcrum comprising a jaw member of one integral piece of metal forming the parallel angularly disposed sides, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

7. A brake-beam fulcrum comprising a jaw member of one integral piece of forged metal forming the parallel angularly disposed sides, and two separate beam members for securing the jaw member to the beam, one of the ends of each of said beam members projecting between the jaws of said jaw member, substantially as described.

8. A brake-beam fulcrum comprising a jaw member having angularly disposed sides and a flat central portion and two separate beam members, adapted to engage the flat central portion between the jaws of the jaw member and secure it to the beam, substantially as described.

9. A brake-beam fulcrum of forged metal comprising an angularly disposed jaw member and two separate beam members adapted to engage the flat central portion between the jaws of the jaw member, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NATHANIEL S. REEDER.

Witnesses:

H. S. HAMMOND,  
C. E. BUCKLEY.