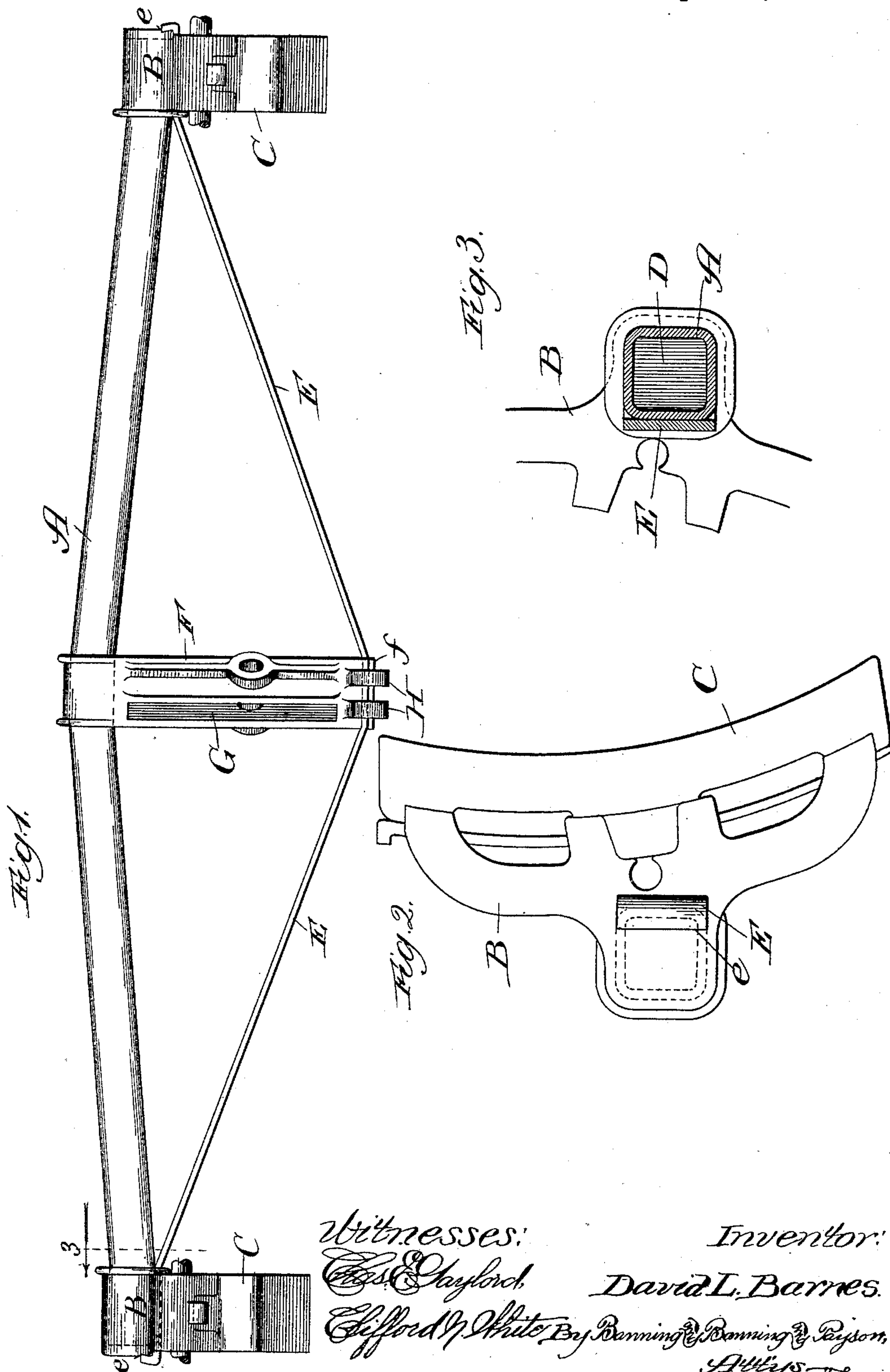


(No Model.)

D. L. BARNES.  
CAR BRAKE.

No. 450,948.

Patented Apr. 21, 1891.



Witnesses:

Chas. C. Gaylord

Clifford V. White

Inventor:

David L. Barnes

By Ranning & Ranning  
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# UNITED STATES PATENT OFFICE.

DAVID L. BARNES, OF CHICAGO, ILLINOIS, ASSIGNOR TO ELIZABETH H. FROST, OF SAME PLACE.

## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 450,948, dated April 21, 1891.

Application filed January 19, 1891. Serial No. 378,255. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID L. BARNES, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification.

My present invention relates particularly to the construction of the brake-beam, and has for its object the production of a simple, easily - constructed, and serviceable beam; and the invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of my improved beam; Fig. 2, an end view of the brake head and shoe shown at the left hand of Fig. 1; and Fig. 3, a section on line 3 of Fig. 1, looking in the direction of the arrow, the last two figures being upon an enlarged scale.

In making my improved beam I take a piece of square pipe A of suitable dimensions and bend it preferably into the form shown in Fig. 1, the ends being preferably bent back to enable them to easily enter the sockets in the brake-heads.

The brake-head B, in so far as the method of attaching the shoe C thereto is concerned, is made in any of the ordinary forms, and this part of its construction deserves no particular description. The brake-head, however, is further provided with a square socket D of suitable dimensions to receive the end of the pipe A, and also with a slot or opening of suitable size to allow a strap E to pass through the same, and with an offset *e* in its outer surface intended to receive the end of this strap, as hereinafter described. The strap E consists of a piece of malleable iron of suitable dimensions—as, for instance, three-eighths of an inch thick and two inches broad and of a length depending upon the length of the beam.

The strut F may be made of any suitable form, having at one end a square hole, through which the pipe A is passed, and at the other a shoulder or rib *f*, intended to prevent the strap E from slipping off. The strut is also provided with a mortise or slot G, through which the brake-lever passes, and with lugs

or shoulders H, to which a hanger may be attached to afford additional support for the brake-beam, and which aid the shoulder *f* in preventing the slipping of the strap E.

The parts being constructed are put together in the following manner: The strut is first slipped over the pipe A, and the brake-heads then passed over the ends thereof. The strap is then heated to a proper temperature and bent over the strut, and its ends passed through the slots in the brake-heads and then bent back, as shown, into the grooves or recesses *e*, thereby preventing the strap from being withdrawn. When the strap cools, it will of course contract and draw the brake-heads tightly onto the pipe, bind the strut in place, and hold all of the parts firmly together.

Although I have shown in the drawings and described thus far in the specification a square pipe as being the form in which my beam is made, this is merely for convenience and brevity, and I do not desire to be understood as limiting myself to the use of a square pipe solely, since a rectangular pipe of any sort can be used with equal advantage, and I contemplate so using it. Of course when using other forms of rectangular pipe the sockets in the brake-heads and the hole in the strut should be made of a shape to correspond to the form of the pipe used.

The pipe of rectangular cross-section, which I prefer to use, has advantages over the round pipe shown in my patent, No. 438,673, granted to me October 21, 1890, inasmuch as it does not admit of a twisting strain, causing the socket-pieces to work loose. It also forms a better bearing for the post between the truss-rod and the pipe. In addition to these advantages, it is more easily held in the clamp or former during the process of manufacture.

I claim—

1. The combination of a rectangular pipe and the combined socket-pieces and brake-heads, substantially as described.

2. The combination of the rectangular pipe, the combined brake-heads and socket-pieces, and the strap, substantially as described.

3. The combination of a rectangular pipe, brake-heads provided with sockets to receive

the ends of the pipe, and a strap having its ends passed through slots in the brake-heads substantially parallel to the pipe, substantially as described.

- 5 4. The combination of a rectangular pipe, the brake-heads provided with sockets to receive the ends of the pipe, a strut, and a strap passed over the strut and through slots in

the brake-heads and fastened, holding the parts of the beam in place, substantially as is described.

DAVID L. BARNES.

Witnesses:

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