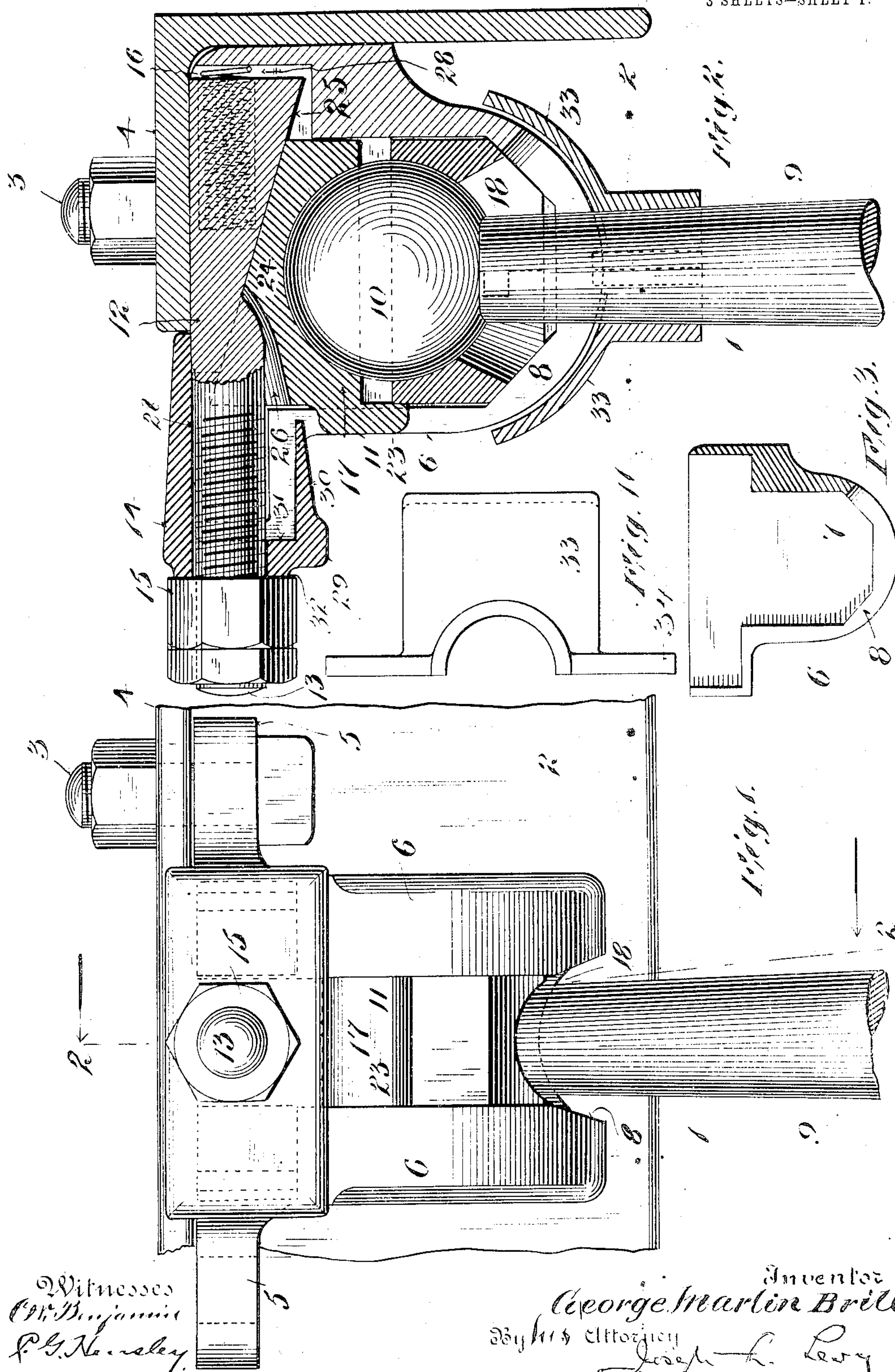


No. 813,346.

PATENTED FEB. 20, 1906.

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ADJUSTABLE BRAKE HANGER.  
APPLICATION FILED MAY 1, 1905.

3 SHEETS—SHEET 1.





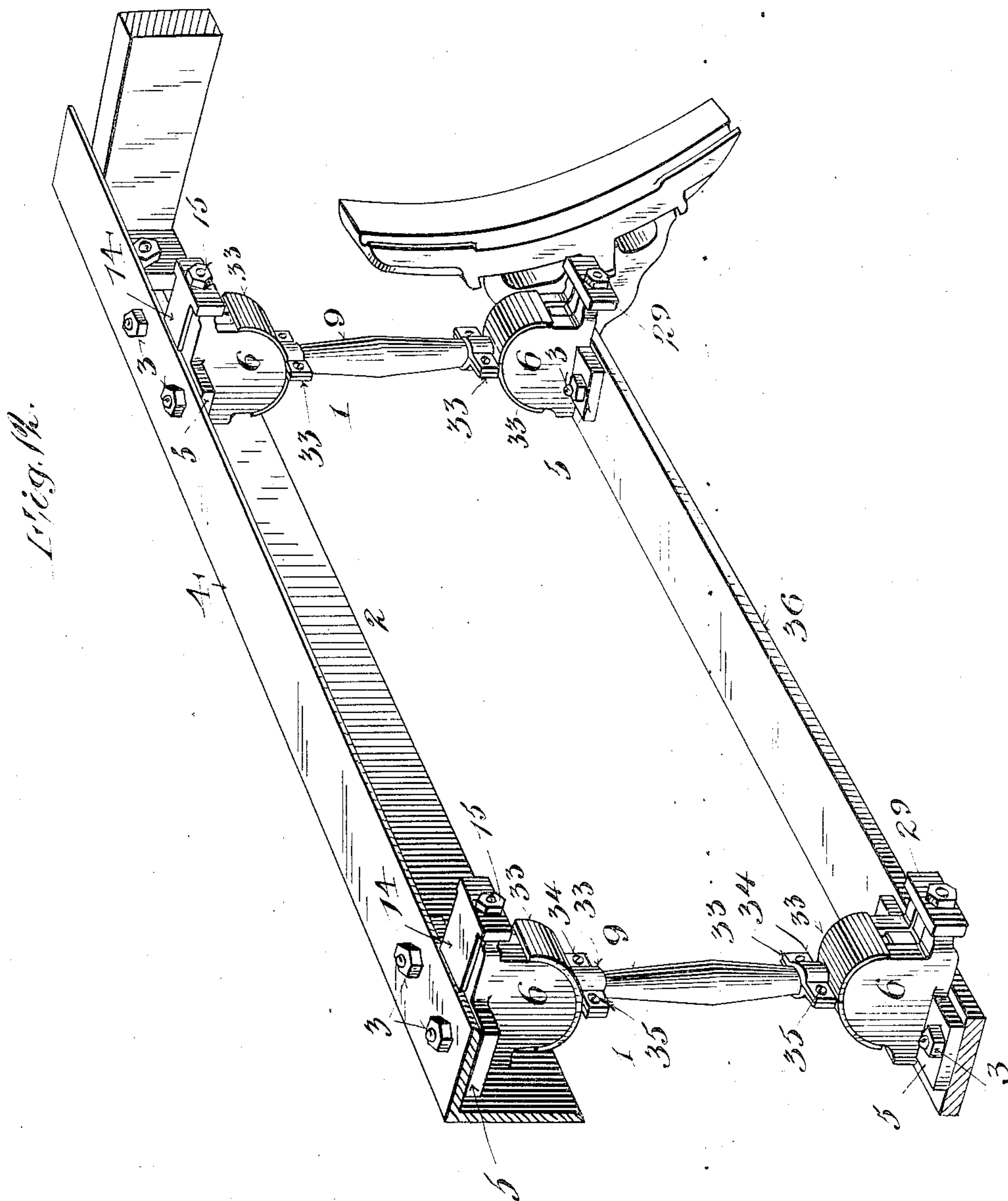


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3 SHEETS—SHEET 3



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE MARTIN BRILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR  
TO JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

## ADJUSTABLE BRAKE-HANGER.

No. 813,346.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed May 1, 1905. Serial No. 258,154.

*To all whom it may concern:*

Be it known that I, GEORGE MARTIN BRILL, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Adjustable Brake-Hangers, of which the following is a specification.

The object of my invention is to provide an article of this class which will always support and secure the brake in its proper position relative to the wheels and which has means for readily taking up all wear of the moving parts. This object is accomplished by means of my improved hanger, which consists, broadly speaking, of a rod having a ball at each end resting in adjustable sockets, which in turn rest in casings, one of the casings being attached to a transom or other portion of a truck or car and the other being attached to a brake-beam or other suitable part of a brake mechanism.

For a more particular description of my invention reference is to be had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a front elevation of a portion of my improved hanger attached to a transom. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1 looking in the direction of the arrows. Fig. 3 is a sectional view of the casing. Fig. 4 is a plan view of the casing with the parts in place, the cap being shown broken away to more fully disclose the structure. Fig. 5 is a side elevation of the lower section of the socket. Fig. 6 shows half of the section shown in Fig. 5, and Fig. 7 is a perspective view of the portion shown in Fig. 6. Fig. 8 is a perspective view of the wedge with its bolt. Fig. 9 is a perspective view of the upper section of the socket. Fig. 10 is a perspective view of the cap. Fig. 11 is a plan view of the cover. Fig. 12 is a perspective view of the hangers, brake-beam, and a portion of the truck-frame.

Throughout the various views of the drawings similar reference characters designate similar parts.

As each end of my improved brake-hanger is provided with the same identical means for adjusting, a description of one will answer for both, and for convenience the upper portion is particularly described, the lower being referred to when convenient.

The brake-hanger 1 is bolted or otherwise suitably secured to the transom 2 by means of the bolts 3, which extend through the horizontal web 4 of the transom 2 and ears 5 of the casing 6. The casing 6 is preferably cast in one integral piece and is provided with a downwardly-extending pocket 7 and a slot 8, which extends from the top of one side to beyond the lower portion of the bottom, as shown in Fig. 3. The pocket 7 may be given any suitable shape, although it is preferably made as shown. A rod 9 extends through the slot 8 and has a ball 10 at its upper end, which ball rests in the socket 11, which fits in the pocket 7 and is held against the ball by means of a wedge 12, which has a bolt 13, that passes through the cap 14 and is held in position by means of nuts 15 and springs 16, as will more particularly appear below.

The socket 11 is divided into an upper section 17 and a lower section 18. The lower section 18 is composed of two identical parts, as shown more particularly in Figs. 5 to 7, inclusive, and each part is provided with a recess 19, preferably spherical-shaped to fit the ball 10, and a tongue 20 and a groove 21, which are conveniently placed, so that the parts 18 will conveniently fit together, the tongue 20 of one part entering the groove 21 of the other. The lower portion of the recess 19 adjoins the flared opening 22, which is adapted to receive and surround, but not fit, the rod 9. The exterior of the section 18 is made to fit the lower portion of the pocket 7. The section 17 rests on top of the ball 10 and is supported thereby a short distance from the lower section 18. The section 17 has a lip 23, which rests in the slot 8 and slightly overlaps the upper corner of the section 18. The upper edge 24 of the section 17 is preferably given an inclined form with a plane surface, which is adapted to fit and engage a similar inclined plane surface 25 on the wedge 12. Where the bolt 13 extends from the wedge 12, the section 17 is recessed, as shown at 26, so as not to interfere with the movement of the wedge and bolt.

The wedge 12 is provided with cylindrical holes or recesses 27, in which rest springs 16, which springs 16 also rest against the walls of the casing 6 and tend to force the wedge-surfaces 24 and 25 into intimate contact. This wedge 12 is also in contact with the under side of the web 4. The bolt 13, which is fixed



to or made integral with the wedge 12, passes through the cap 14, which cap abuts against the web 4 and surrounds the outer and upper edge of the casing 6. This cap 14 is provided with the cover 28, which rests on the casing 6 and abuts against the web 4, as above described, and the flange 29, which surrounds the laterally-extending portion of the casing 6. The flange 29 has a projection 30, which runs parallel with the cover 28 and enters into the slot 8. The vertical web 31 of this cap which the flange 29 surrounds is provided with a perforation 32, through which the bolt 13 extends, and the nuts 15 rest against this vertical web 31 when the parts of the brake-hanger are assembled.

It is preferable to conceal the slot 8 by means of covers 33, which are clamped to the rod 9 where this rod passes through the casing 6. These covers 33 are preferably made in two identical parts which are bolted together by means of bolts 34 and flanges 35.

Assuming the parts of my improved hanger to be separated, they are assembled as follows: The lower section 18 of the section 11 is placed around the rod 9 and snug against the ball 10 at the end of this rod. This can readily be done because of the two-part structure of this section. The rod 9 is then shoved through the slot 8 and the section 18 is drawn into its proper position. The ball 10 is then covered by the section 17, with its tongue resting in the slot 8 and overlapping the section 18, and the wedge 12, together with its spring 16, is then placed in position in the casing 6 and on the section 17, so that the wedged surfaces 24 and 25 are in contact. The cap 14 is then threaded onto the bolt 13 and placed so that the top 28 covers the laterally-extending portion of the casing 6, and the lug 30 enters and closes the upper end of the slot 8, the flange 29 surrounding the sides and bottom of this laterally-extending portion of the casing 6. The nuts 15 are then screwed in place, and the casing 6 is then secured to the transom 2 by means of the bolts 3 and web 4 or to the brake-beam 36, as may be appropriate. The covers 33 are then secured in place and the brake-hanger is ready for adjustment. It is adjusted for use by turning the nut 15 until the ball 10 turns without binding and without loss of motion in the socket 11. One of the nuts 15 is preferably a lock-nut, so that the adjusted position of the parts is maintained until a readjustment becomes necessary to compensate for wear.

While in the foregoing I have shown and described one embodiment of my invention, it is obvious that I should not be restricted thereto, as this invention may be embodied in many forms, all of which come within the scope of the annexed claims.

What I claim is—

1. In a device of the class described, a rod,

a ball at the end of said rod, a casing and an adjustable socket resting in said casing and surrounding said ball.

2. In a device of the class described, a rod with a ball at one end, a casing, an adjustable socket mounted in said casing and means for causing said socket to engage said ball.

3. In a device of the class described, a rod with a ball at one end, a casing, an adjustable socket mounted in said casing, a wedge engaging a part of said socket and means for causing said wedge to force the ball and socket together.

4. In a device of the class described, a rod with a ball, a casing, an adjustable socket mounted in said casing and surrounding said ball, one part of said socket having an inclined face, a wedge engaging said inclined face, and springs resting in said wedge and against said casing.

5. In a device of the class described, a rod with a ball, a casing, an adjustable socket resting in said casing, and provided with a plurality of parts, one of said parts having a lip which overlaps a portion of another part, and means for causing the parts of the socket to rest snug against the ball.

6. In a device of the class described, a rod having a ball at one end, a casing, a socket composed of a plurality of parts which are adapted to be forced into an engagement with said ball, a wedge adapted to engage one of said parts, a cap engaging a portion of said casing and a bolt connecting said wedge and cap, whereby the parts of the socket may be forced into engagement with the ball.

7. In a device of the class described, a rod with a ball at one end, a casing, an adjustable socket mounted in said casing, and fitting said ball, said socket being divided into upper and lower sections, the lower section being formed with a plurality of interchangeable parts.

8. In a device of the class described, a rod having a ball at one end, a casing having an elongated slot at its lower portion extending on each side of said rod, an adjustable socket composed of upper and lower sections embracing said ball, a cap and means for connecting said cap and socket, whereby the parts of the socket may be forced into engagement with said ball.

9. In a device of the class described, a rod with a ball at one end, a casing, with adjustable socket mounted in said casing and surrounding said ball, and slot in said casing through which said rod protrudes, means for causing the portions of the socket to engage the ball and covers fixed to said rod and adapted to conceal said slot.

10. The combination with a brake-shoe head, a hanger for supporting or suspending the same, furnished with a ball-and-socket joint to give the head a free and unrestricted motion in all directions and to permit the



brake-shoe to properly fit and bear against the wheel at all times when applied thereto and compensate for wear or lack of proper adjustment of parts.

- 5 11. In a device of the class described, a hanger for suspending or supporting a brake-beam, provided with a ball-and-socket connection between said hanger and brake-beam and a ball-and-socket connection at the up-

per end of said hanger between the same and the truck-frame, each of said ball-and-socket connections comprising a ball and a two-part socket surrounding the ball.

Signed this 26th day of April, 1905.

GEO. MARTIN BRILL.

Witnesses:

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TERRENCE McCUSKER.