

C. H. WILLIAMS, JR.
ADJUSTABLE BRAKE ROD.
APPLICATION FILED OCT. 17, 1910.

1,019,872.

Patented Mar. 12, 1912.

FIG. 1

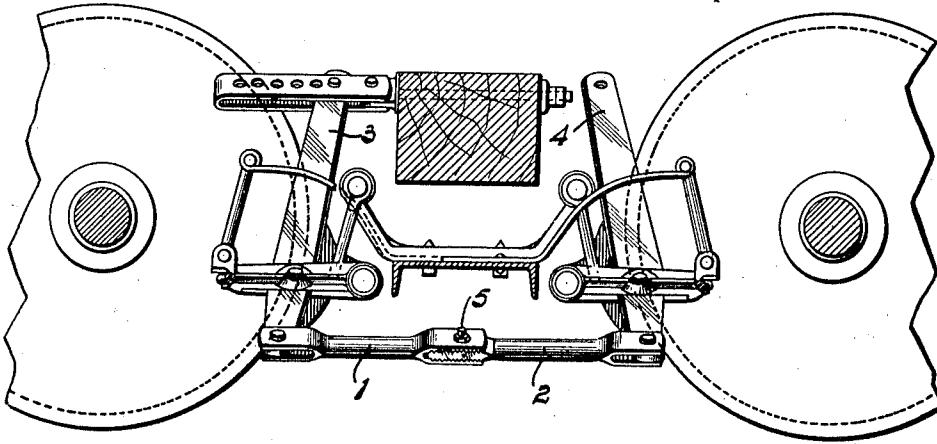


FIG. 2.

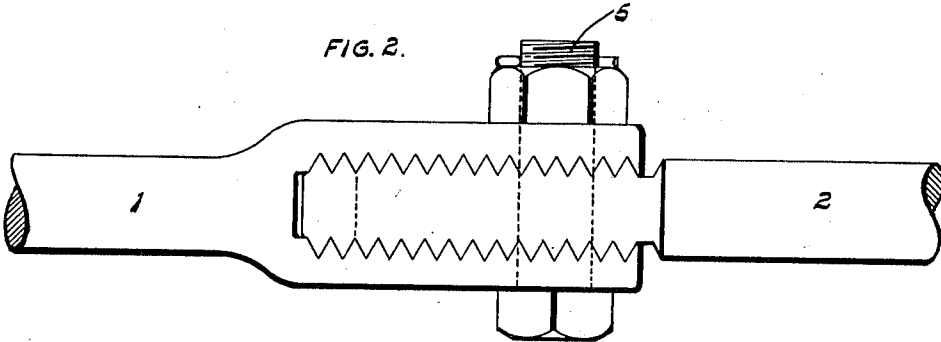
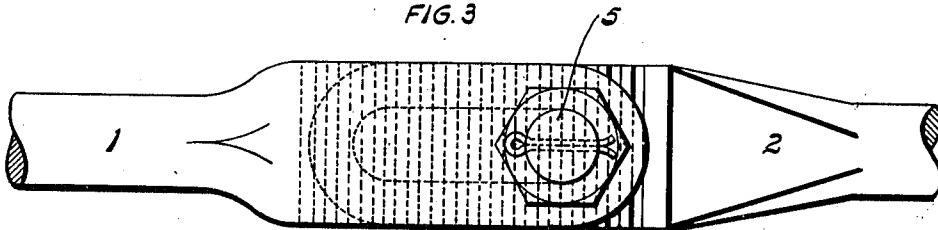


FIG. 3



WITNESSES

Wm. J. J. J.
E. M. Harrington.

INVENTOR

CHARLES H. WILLIAMS JR.
BY *J. R. Cornwall* ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES H. WILLIAMS, JR., OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ADJUSTABLE BRAKE-ROD.

1,019,872.

Specification of Letters Patent.

Patented Mar. 12, 1912.

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To all whom it may concern:

Be it known that I, CHARLES H. WILLIAMS, JR., a citizen of the United States, residing at Chicago, Illinois, have invented
5 a certain new and useful Improvement in Adjustable Brake-Rods, 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
10 same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view through a truck showing my improved adjustable
15 brake rod in position. Fig. 2 is a side elevational view showing the manner of adjusting the rod, and Fig. 3 is a top plan view of the same.

This invention relates to a new and useful improvement in an adjustable brake
20 rod for use in railway trucks, the object being to provide the brake rod with means whereby its length can be adjusted to compensate for wear of the brake shoes or reduction in the diameter of the truck wheels. In
25 modern railway practice, steel wheels are going into general use, and as these become worn they are trued by grinding their surfaces, which results in reducing their diameters. A wheel originally thirty-three
30 inches in diameter may be reduced to thirty inches in diameter by such grinding and truing practice, and when this is done the lessened diameter of course changes the
35 relation of the brake rigging to the wheels.

It is therefore the purpose of my invention to provide means whereby the brake
rod which connects the brake levers or
40 other parts of the brake mechanism may be adjusted as to its length.

Another important object of my invention is to compensate for variations in brake
beams. On one of the large railroad systems two brake beams are used in which
45 the relation of the pin-hole to the face of the shoe differs $\frac{1}{16}$ of an inch, and if the bottom connection, together with the dead lever stop and truck rigging, is arranged to take care of one beam, it will not allow
50 satisfactory application to the other on account of the difference in the lever pin-hole location. It will be seen that $\frac{1}{16}$ of an inch difference makes $1\frac{1}{2}$ inches difference in the
55 two beams on the truck and if the bottoms of the live and dead levers are held

by a fixed bottom connection and the pin-holes are separated $1\frac{1}{2}$ inches or brought nearer together $1\frac{1}{2}$ inches, the angularity of the levers will be so affected as to seriously interfere with the efficiency of the brake
60 and also absorb the allowance made in the dead lever stop for wear of the brake shoes, etc. By the use of an adjustable bottom connection providing a possibility of moving such bottom connection ends outwardly or
65 inwardly to correspond with different locations of lever pin-holes in the brake beams, it would be possible to establish, as is proposed to do under the conditions under consideration, a single standard beam which
70 could be used in place of the double standard beam now employed, by the use of two bottom connections or by the use of the adjustable bottom connection herein contemplated.
75

I am aware that turn buckles have been employed heretofore for adjusting the length of brake rods, but these turn buckles can only be employed where the rod is placed
80 under tension in service. My improvement contemplates the adjustment in the length of a rod which is designed to be placed in compression in service. Of course the rod may also be placed under tension with
85 my adjustable connection, as the connection between the centers of the rod is equally strong under both pulling and compression strains.

In the drawings, 1 and 2 indicate the sections of a rod used to connect the lower ends
90 of the brake levers 3 and 4, respectively, which rod sections are united together in the length of the rod by an adjustable connection formed preferably by making the
95 contiguous ends of the sections into male and female members, the adjacent faces of which are provided with interlocking ribs and recesses arranged at an angle to the
100 line of stress. One of these members is preferably provided with a slot (the male member being so provided, as shown in the drawings), while the other cooperating element is provided with registering openings
105 through which passes the clamping medium preferably in the form of a bolt and nut, 5. To adjust this rod it is only necessary to remove the bolt and disengage the cooperating elements by lateral movement, when they may be adjusted in a new and desired
110 relation each to the other, the assemblage

causing the slot and bolt openings to register, after which the bolt may be introduced and the nut screwed into position. A cotter pin is preferably employed to hold the nut
5 against displacement.

What I claim is:

An adjustable brake rod composed of sections, one of which is provided with integral jaws for receiving the end of the contiguous
10 section, the engaging faces of said sections being formed with transversely disposed interlocking projections, the contiguous sec-

tion being provided with an elongated slot, a bolt passing through the integral jaws of the first section and through said slot, in
15 such manner that said slot is covered by said integral jaws, substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 27th day of September, 1910.

CHARLES H. WILLIAMS, JR.

Witnesses:

E. T. WALKER,

M. F. HUNTOON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."