P. B. HARRISON.

REVERSIBLE STRUT FOR BRAKE BEAMS.

APPLICATION FILED NOV. 16, 1911.

1,037,903.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.

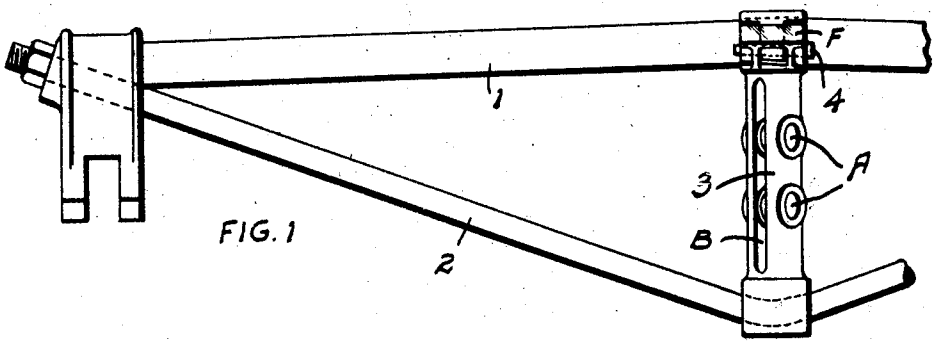

FIG. 1

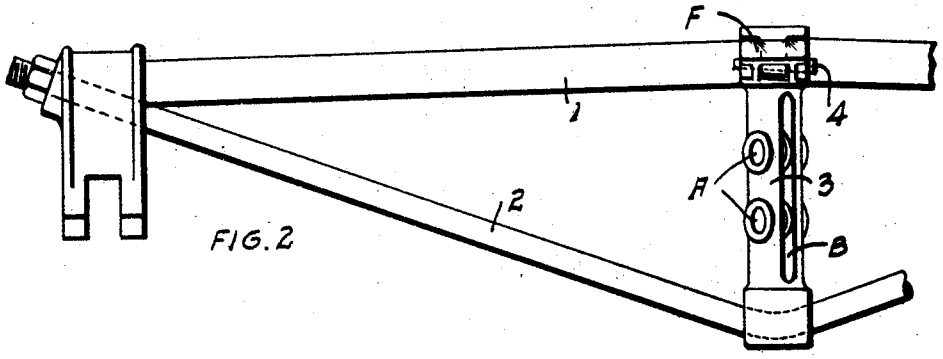

FIG. 2

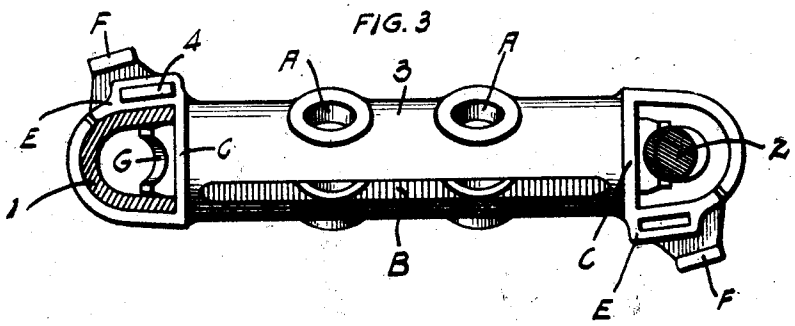

FIG. 3

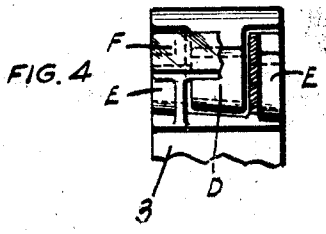

FIG. 4

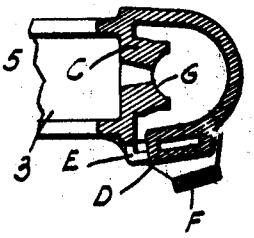

FIG. 5

WITNESSES

Wm. Jarvis.

J. A. Bishop

INVENTOR

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2 SHEETS—SHEET 2.

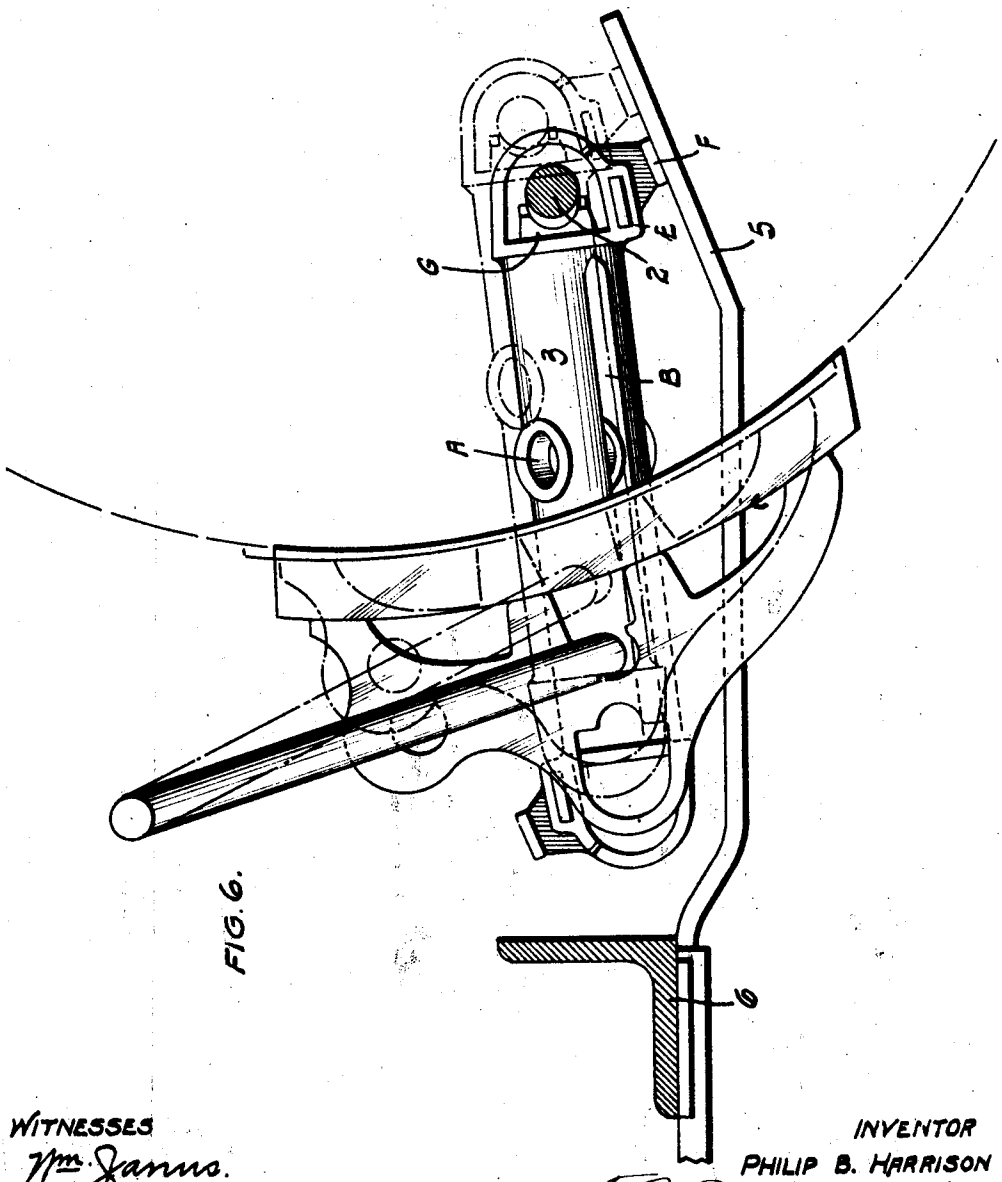

FIG. 6.

WITNESSES

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UNITED STATES PATENT OFFICE.

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REVERSIBLE STRUT FOR BRAKE-BEAMS.

1,037,903. Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed November 16, 1911. Serial No. 660,741.

To all whom it may concern:

Be it known that I, PHILIP B. HARRISON, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Reversible Struts for Brake-Beams, 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 same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a brake beam showing my improved strut in position thereon for use in connection with a right hand brake lever. Fig. 2 is a similar view showing my improved strut lever in position to be used in connection with a left hand brake lever. Fig. 3 is a detailed side elevational view of my improved strut partly in section. Fig. 4 is a plan view of the left hand portion of the strut shown in Fig. 3. Fig. 5 is a sectional view through the end of the strut. Fig. 6 is a view illustrating the method or manner of mounting the beam in connection with a third suspension.

This invention relates to a new and useful improvement in reversible struts especially adapted for use in connection with brake beams, the object being to construct a strut whose ends are substantially alike and provided with seats for the compression and tension beam members respectively, whereby the strut is interchangeable end for end and may be used for either a right or left hand brake lever for inside and outside hung brakes.

My invention also contemplates means for fixedly securing the strut upon the compression member, which means is practically duplicated at each end of the strut, and incidentally to this securing means I also provide each end of the strut with a rubbing surface or projection which may be employed as an element of the third suspension or support such as disclosed in the Kiesel Patent, No. 997,922, dated July 11th, 1911.

By the use of my invention it is possible for the makers of brake beams and their customers, such as railroads who wish to carry repair parts in their repair shops, to dispense with right a. l left hand struts, the manufacturers econoinizing in the manufacture of these struts by the use of a single pattern where two patterns have heretofore been required for right and left hand one piece struts.

In the drawings: 1 indicates the compression member shown here as U-shaped in cross section, although it is obvious that compression members of different cross sectional contour may be employed; 2 is the tension member here shown as a round rod, although it is obvious that other forms of tension members may be employed; 3 is the strut, said strut being shown as having two pin holes A, but it is obvious that if desired a single pin hole may be employed at the center of the strut.

B is the slot through which the brake lever passes. This slot preferably does not extend throughout the length of the cylindrical portion of the strut, but terminates short of the ends thereof, so as to provide a solid cylindrical end portion integral with the strut ends or heads. The strut end walls C may be provided with openings as shown, in Fig. 5, for convenience in anchoring the cores, or said ends may be solid, as desired.

D indicates a tongue formed by circumferentially splitting the end wall, said tongue being enlarged at its free end and provided with an opening for the wedge key 4. This tongue fits between two wall portions E which are also formed with openings to receive the wedge key, but which openings normally are out of alinement with the opening in the tongue D so that when the wedge is driven home, the tongue D will be drawn inwardly against the compression member to clamp same firmly to its seat.

F indicates a rubbing surface connected by webs to the wall portions E and forming members to coöperate with the third suspension spring 5 which is secured to a portion 6 of the truck frame, as shown in Fig. 6.

G is a seat for the tension member which seat is widened near the end wall of the strut, as shown in Fig. 3, so that when the legs of the compression member are seated on each side thereof, they will be wedged in position, and in this way assist in holding the strut on the compression member.

In placing the strut in position on the

compression member, the tongue D is sprung out sufficiently far to enable the easy introduction of the compression member into the space provided therefor in the end of the strut, and with the strut in its intended position the workman preferably, by blows of a hammer, drives the legs or flanges of the compression member into the wedge-shaped seats, and at the same time forces the tongue D down into position, so that the key 4 may be passed through the opening therein and in the walls E. By driving the wedge key through these openings, the tongue D and the wall connected therewith are drawn tightly over the compression member clamping the same in its seat. The third suspension member F is located above the compression member, as shown in Fig. 3, while its companion at the diagonally opposite corner of the strut is located under the tension member, so that the latter may coöperate with the third suspension spring 5, as shown in Fig. 5. Preferably, the small end of the wedge key 4 is bent by the blow of a hammer, so as to prevent its accidental retraction. In this form of my invention, the wedge key is located above the compression member, so that the length of the strut beyond the compression member is not increased.

The two pin holes shown in the drawings are employed to maintain the proper location of the lever pin relative to the face of the shoe when the strut is used for either a right or left hand brake lever. By this arrangement, when the strut is reversed, any wear in the pin holes will be compensated for.

What I claim is:

1. A strut having walls which embrace the compression member and clamp the same in position, and a removable wedge key for holding the said walls in their clamped position.

2. A strut having a wall divided circumferentially and transversely so as to provide over-lapping portions and forming a seat for the compression member, said wall completely embracing said compression member and means for drawing the divided overlapping portions of said wall together so as to clamp the compression member in position therein.

3. A strut having a split wall forming a seat for the compression member, one portion of said wall having a perforated tongue and the other portion of said wall having alining perforations, and a wedge key operating in said perforations.

4. A strut having seats for the compression and tension members at each end thereof, walls for embracing the compression member, and means for drawing said walls together to clamp the compression member to its seat.

5. A strut having seats for compression and tension members at each end thereof, walls embracing the compression member said walls having overlapping portions provided with registering openings and keys fitting in said openings for clamping the compression member to its seat.

6. A strut having a seat in its end for a compression member, walls embracing said seat, said walls being divided at one side of the compression member so as to permit of independent movement thereof and having registering openings in combination with a wedge key fitting in said openings for drawing said walls together to clamp the compression member to its seat.

7. A reversible strut having seats for compression and tension members at each end thereof, the seats for the tension member having openings therethrough for the passage of core anchors.

8. A reversible strut having seats for compression and tension members at each end thereof, walls for embracing the compression member, said walls being split so as to form overlapping tongues having registering openings and projections for coöperating with a third suspension member carried by one of said walls at diagonally opposite corners of the strut.

9. A one piece reversible strut having a plurality of pin openings whereby when the strut is reversed the relation of the operative pin opening to the brake heads is maintained.

10. A one piece reversible strut having a plurality of pin openings whereby when the strut is reversed a new pin opening is presented in proper operative relation to the brake heads.

11. A one piece reversible strut having a plurality of pin openings one pair of which only is in service, whereby when the strut is reversed another pair of pin openings is positioned in operative relation to the brake heads.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this thirteenth day of November, 1911.

PHILIP B. HARRISON.

Witnesses:
EDW. T. WALKER,
M. F. HUNTOON.