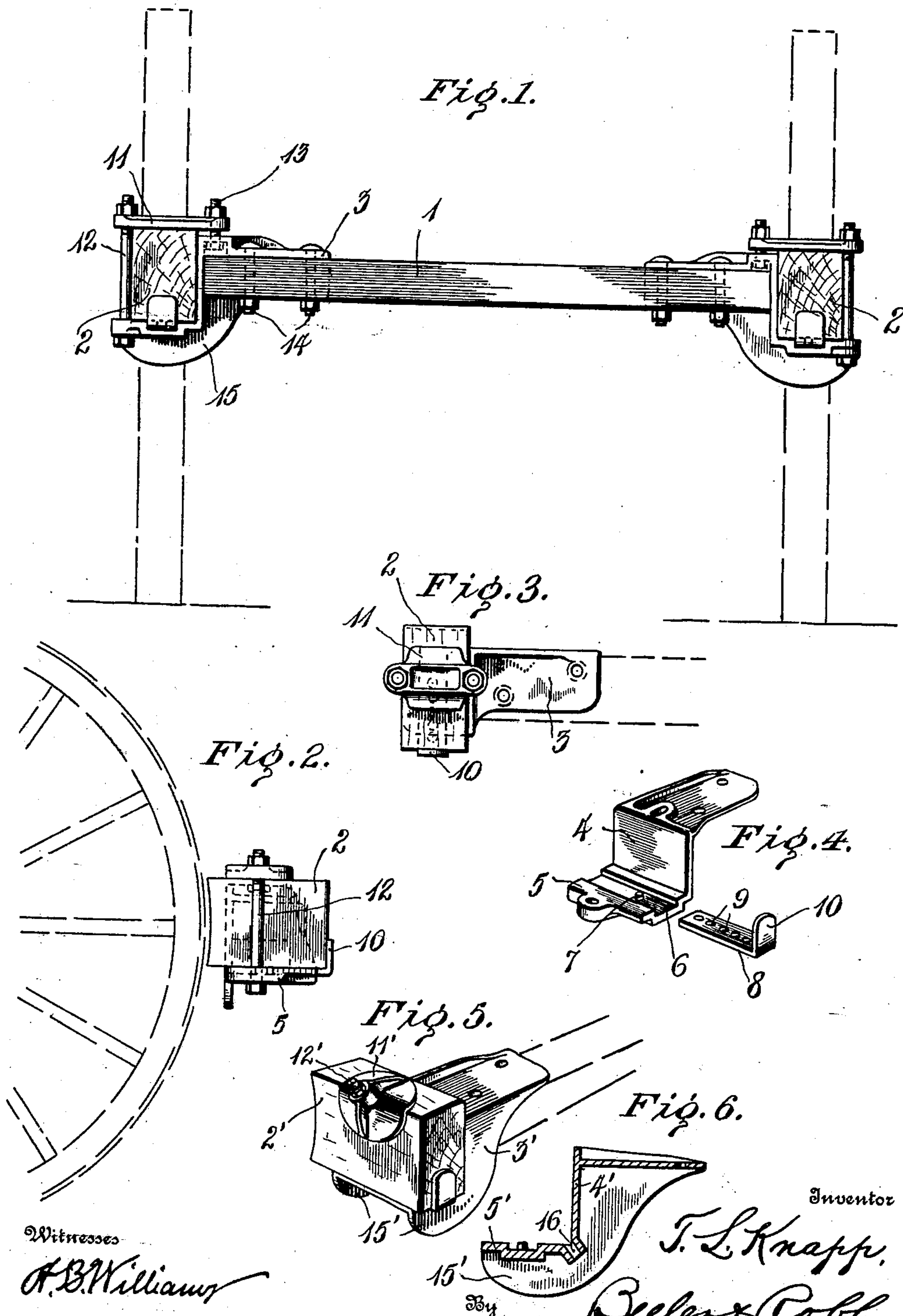


No. 890,774.

PATENTED JUNE 16, 1908.

T. L. KNAPP.
VEHICLE BRAKE SHOE.
APPLICATION FILED MAR. 24, 1908.



Witnesses

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VEHICLE BRAKE-SHOE.

No. 890,774.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed March 24, 1908. Serial No. 422,883.

To all whom it may concern:

Be it known that I, THERON L. KNAPP, a citizen of the United States, residing at Woodstock, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Vehicle Brake-Shoes, of which the following is a specification.

The object of this invention is to provide simple improvements in vehicle brakes.

The invention comprises essentially novel means for securing a brake shoe to the brake beam by which it is carried, in such a manner as to permit of ready adjustment of the brake-shoe for the purpose of accommodating for wear.

For a full understanding of the present invention reference is to be had to the following detail description, and to the accompanying drawings, in which;

Figure 1 is a rear elevation of a brake beam having brake-shoes secured thereto by the means comprising the invention; Fig. 2 is a side elevation of the brake-shoe and attaching means therefor, a portion of a wheel being illustrated in dotted lines; Fig. 3 is a top plan view of the shoe and supporting hanger; Fig. 4 is a perspective view of the hanger and the adjusting plate carried thereby; Fig. 5 is a perspective view of a modification of the invention; and Fig. 6 is a vertical section of the shoe supporting member or hanger shown in Fig. 5.

Similar reference characters refer to similar parts throughout the description and drawing.

Specifically describing the construction of the invention and referring to the drawing particularly, the numeral 1 indicates a conventional form of brake-beam, such as is commonly used to carry the brake-shoes 2 of vehicle brakes. The brake-shoes 2 are ordinarily made of wood and are thus readily worn by the braking action thereof with respect to the wheels of the vehicle, it being therefor extremely desirable to have some convenient means whereby the lost motion incidental to wear upon the brake-shoes may be taken up.

In carrying out the present invention each brake-shoe 2 is supported by a supporting member or hanger 3. The hanger 3 embodies a depending side portion 4 from which outwardly extends an integral arm 5. The shoe 2 is supported upon the arm 5 of the hanger, and said arm is provided with a seat

6, or recess, in its upper side. At a suitable point in the length of the seat 6 is located an upwardly projecting lug or projection 7 and said seat is adapted to receive therein the body of an adjustable plate 8. The plate 8 is formed with a plurality of openings 9 at intervals in its length, and any one of said openings is adapted to receive the projection 7 on the arm 5, to thereby hold the plate 8 at a predetermined adjustment.

An integral extension or stop 10 projects upwardly from the rear end of the plate 8, and this stop is adapted to engage the rear end of the brake-shoe 2 adjacent thereto, to hold the brake-shoe rigidly in position, so far as any rearward movement thereof upon the arm 5 of the hanger 3 may be concerned. When the plate 8 has been adjusted by engagement thereof with the lug 7 of the arm 5, the brake-shoe 2 is disposed so that it rests upon the arm and the plate 8 with its rear end engaged by the stop 10.

To prevent displacement of the shoe 2 from the hanger 3 a clamp plate 11 is employed and rests upon the top of the shoe 2, being secured by means of bolts 12 and 13. The bolt 12 is longer than the bolt 13 and connects the outermost portions of the plate 11 and the hanger 3, passing through suitable openings in these parts. The short bolt 13 connects the inner end of the plate 11 with the middle portion of the hanger, the head of this bolt being countersunk or received in a recess in the under side of the uppermost portion of said hanger. Bolts 14 or similar fastenings are used to attach the hanger 3 permanently to the end of the brake-beam 1 upon which it is mounted. An integral vertical web 15 reinforces the connection of the depending portion 4 with the upper and lowermost portions of the hanger. The hanger 3 is preferably cast integrally with the parts 4, 5 and 15.

It will be apparent from the foregoing description that whenever the brake-shoes become so greatly worn as to detract from the effectiveness of the brake of the vehicle, it is only necessary to remove the plate 11 and adjust the member 8 so that the latter is positioned with the stop 10 nearer the wheel, after which the brake-shoes may be replaced and secured. They will be firmly held at the new adjustment thereof by the members 8, in an evident manner.

Figs. 5 and 6 of the drawing illustrates a modification of the invention. The hanger

3' in the modification is formed with the integral portion 4', and offstanding arm 5', in a manner similar to the hanger 3 above described. The shoe 2' however, is attached 5 to the hanger somewhat differently being held in place upon the arm 5' by an angular clamp plate 11'. The clamp plate 11' is secured in place by a single bolt 12' which passes diagonally through the body of the 10 shoe 2' and through an elongated opening or slot 16 formed in the hanger 3' approximately at the angle where the arm 5' joins the portion 4'. In the modification the hanger is strengthened by the provision of spaced integral webs 15' between which an end of the 15 brake-beam is adapted to be received. The adjustable plate 8 and cooperating parts are used in the modification in substantially the same embodiment as in the preferred form of the invention. To admit of adjustment of 20 the member 2' when it is desired to take up for wear thereupon, it is desirable that the slot 16 be provided so that the bolt 12' may be moved lengthwise thereof in the adjusting 25 operation.

An important feature of the invention resides in the peculiar arrangement of the brake-block or shoe, which is of wood, whereby the line of the grain thereof is 30 radial with respect to the wheel, or in other words the line of the grain of said shoe extends substantially at a right angle from the

point of application thereof to the wheel, in the operation of the brake mechanism.

Having thus described the invention, what 35 is claimed as new, is:

1. In combination, a brake-beam, a hanger attached to said beam, said hanger having an offstanding arm, a brake-shoe mounted on said arm, and a detachable plate having 40 adjustable interlocking adjustment with the arm, said plate being provided with a stop engaging the shoe to hold the latter at a predetermined adjustment.

2. In combination, a brake-beam, a supporting hanger attached thereto and embodying a depending portion having an outwardly extending arm, said arm being provided with a seat therein and a projection in the length of said seat, a detachable plate 50 supported in the seat of the arm and having openings any one of which is adapted to receive the aforesaid projection, a brake-shoe disposed upon the arm of the hanger, a stop 55 carried by the aforesaid plate and engaging the brake-shoe, and clamp means securing the brake-shoe in position upon the arm.

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

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