

May 29, 1923.

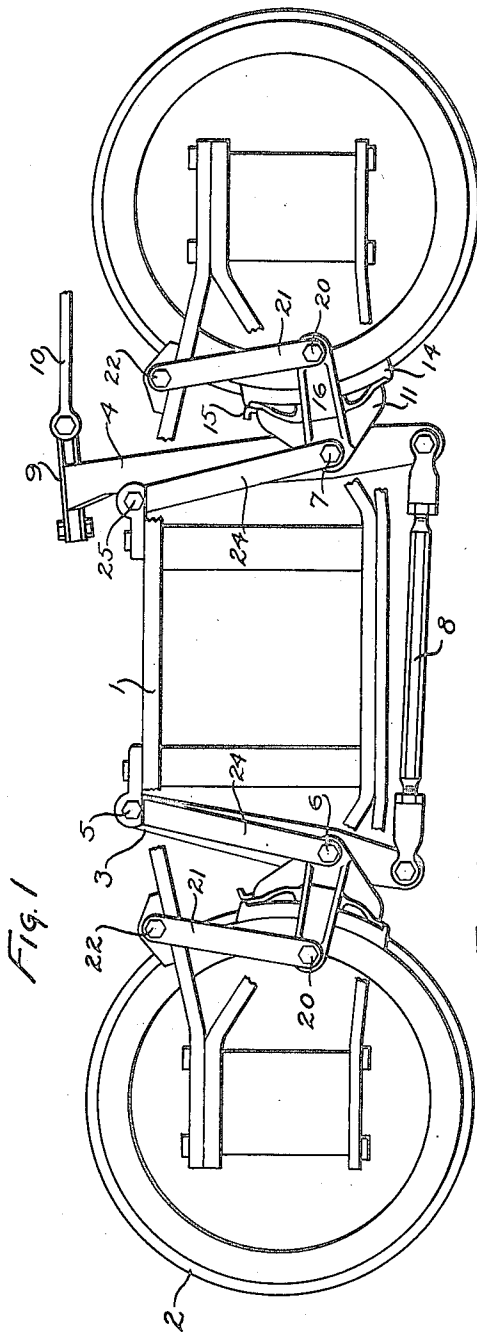
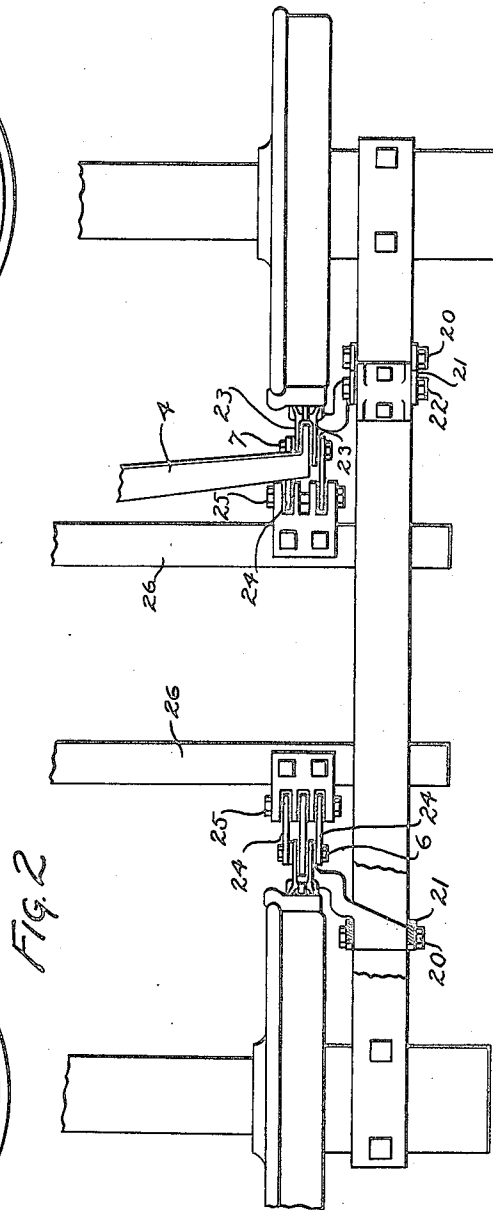
1,456,632

T. ELLIOTT

RAILWAY BRAKE HEAD

Filed March 2, 1922

2 Sheets-Sheet 1



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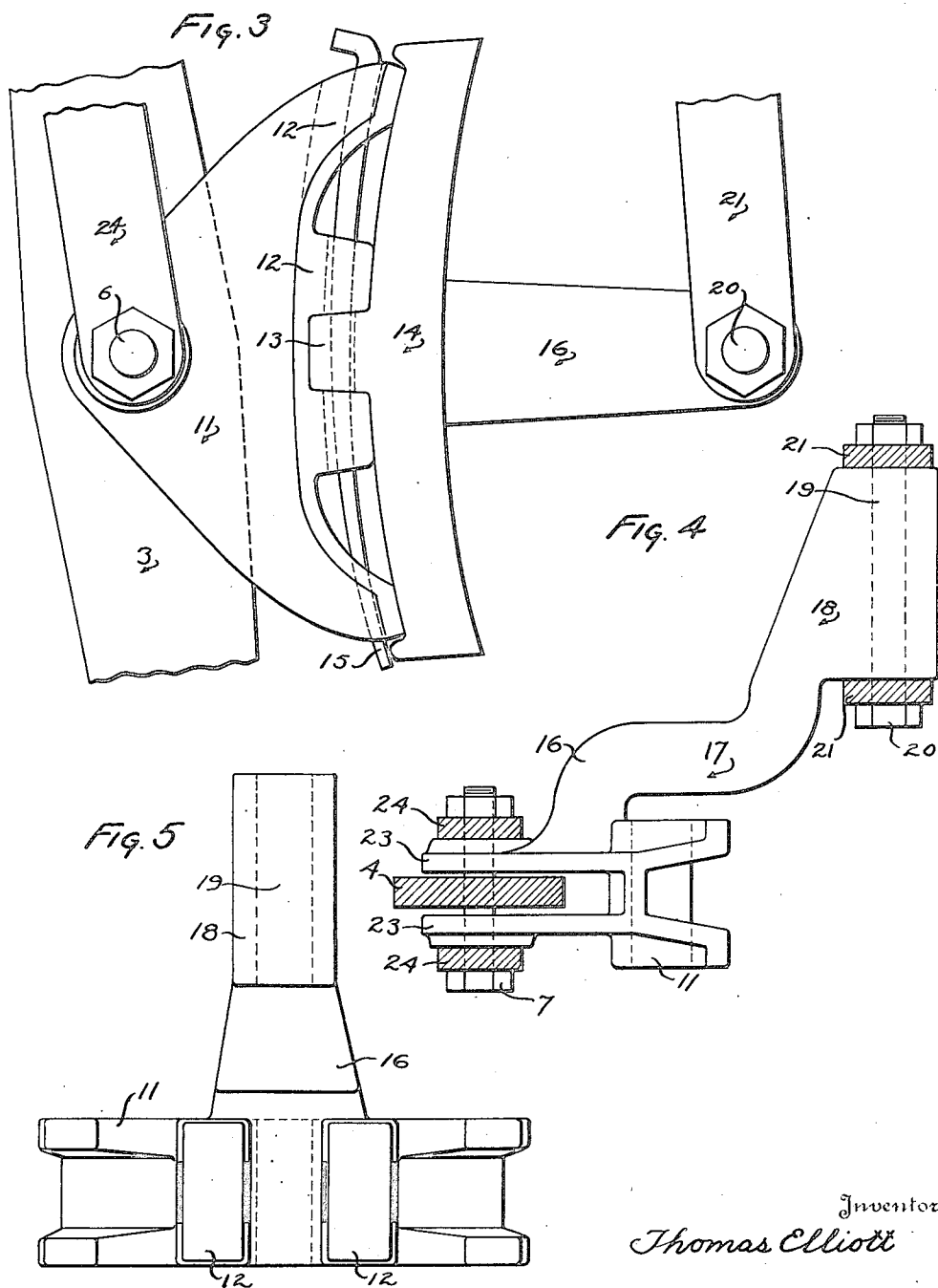
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RAILWAY BRAKE HEAD

Filed March 2, 1922

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

THOMAS ELLIOTT, OF CINCINNATI, OHIO, ASSIGNOR TO THE CINCINNATI CAR COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

RAILWAY BRAKE HEAD.

Application filed March 2, 1922. Serial No. 540,577.

To all whom it may concern:

Be it known that I, THOMAS ELLIOTT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Railway Brake Heads, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to an improved railway brake head.

The general object of the invention is to insure the maintenance of the face of the brake head, or a shoe carried thereby, in a position conforming to the face of the wheel, so that the brake head or its shoe will wear equally throughout and will press the wheel equally throughout the entire surface of the head or shoe.

20 To this end the invention comprises, in its first aspect, a brake head and an arm extending therefrom for attachment with a member or part of the truck frame; and, in its second aspect, to such brake head having such arm in combination with hangers by which the brake head and its arm are suspended from the truck frame in a manner to cause the brake head to conform in position to the position of the face of the wheel, so that the brake head or the shoe attached thereto will wear uniformly and will be applied to the wheel base with equal pressure at all points.

In the accompanying drawings:

35 Fig. 1 is a side elevation of a conventional type of railway car truck with my improved brake head applied thereto;

Fig. 2 is a plan view of a portion of such truck also showing my brake head connected therewith;

40 Fig. 3 is an enlarged side elevation of the brake head and certain adjunct parts;

Fig. 4 is an enlarged plan view of the brake head and a sectional view of such adjunct parts; and

45 Fig. 5 is a face view of the brake head looking to the left in Fig. 4.

For the purpose of showing the manner of mounting and using my improved brake head and such brake in combination with appropriate hangers I have illustrated a conventional type of railway car truck comprising the strutted side beams 1 and wheels

2 with brake levers 3 and 4, the former pivoted at 5 and connected to one of the brake heads by a bolt 6 and the latter connected by a bolt 7 to the other brake head, which latter bolt constitutes the fulcrum of the lever 4. These levers are interconnected by an adjustable connecting rod 8. A clevis arrangement 9 connects with the lever 4 a brake draft rod 10.

Referring now to my brake head proper, which is best seen in the detail views 3, 4 and 5, it will be seen that it consists of a head proper designated 11 having its face fashioned with lugs 12 to interlock with projections 13 on a brake shoe 14, a key 15 being extended through these lugs and projections to secure the head and shoe together. But any other form of construction for this purpose will answer.

The other feature of the head besides the head proper 11 is the lateral arm 16 which is preferably integral with the head and is itself of one piece, though this feature of integrality may not always be used. The arm 16 extends in advance of the face of the brake head and laterally from the head, as seen by the portions designated specifically 17 and 18. The portion 18 is bored out or provided with a hole 19 for a bolt 20 by which the arm is suspended from the side frame of the truck by hangers 21 whose upper ends are suspended from the truck frame by bolts 22. A pair of the hangers 21 constitutes this connection of the brake arm with the truck frame.

And it will also be seen, particularly from Figs. 2 and 4, that the brake head is bifurcated, as indicated at 23, to receive between the bifurcations the brake lever 4 and to receive at each side a hanger 24, the bolt 7 connecting these parts with the bifurcated members of the head. And viewing Figs. 1 and 2 it will be seen that these hangers 24 are hung upon the upper part of the truck frame, one set on a bolt 25 and the other set on the bolt 5 before referred to.

It will now be seen that by reason of the arm 16 of the brake head and its mounting the latter will be held with its face or the face of its shoe 14 in a position always to conform to the surface of the wheel, so that the wear on the brake head or its shoe will be uniform throughout, while the pres-

sure of the head or shoe against the wheel will likewise be equally distributed over the whole contacting surface, affording, therefore, uniformity of wear and the most effective application of the brake power.

And it will further be seen that by reason of the position of the arm, with its forward extension 17 and lateral portion 18, it reaches outward and to a position under the upper member of the truck so that it can readily be sustained by the hangers 21 which depend from such upper member.

Again, it will be noted that by reason of the cross or transom members 26 of the truck frame the bolts 25 and hangers 24 can be sustained at a point in line with the brake head, so that these hangers readily extend down to the bifurcated members 23 of the head for connection therewith by the bolt 7.

It will further be seen that the hangers 21 being shorter than the hangers 24 incline the arm 16 so that its center line running from the axis of the bolt 7 to the axis of the bolt 20 will be substantially a radial line of the wheel. This further insures positioning the face of the brake head or its shoe flatly against the wheel face.

Thus, the face of the brake head or of its shoe is positioned transversely to conform to the wheel surface by the arm 16 and its set of hangers and is positioned vertically by the coaction of both sets of hangers.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A brake head comprising a head proper adapted for connection with a shoe, and an arm directly connected to the shoe and extending laterally and in advance thereof.

2. A brake head comprising a head proper adapted for connection with a brake shoe and having an integral arm directly connected to the shoe and extending laterally to and in advance thereof.

3. A brake head comprising a head proper adapted for connection with a shoe, and an

arm extending first laterally, then in advance of the head and then laterally.

4. A brake head comprising a head proper having one face adapted for connection with a shoe and formed with bifurcated members, and an arm united with one side of the head and one member and extending laterally and in advance of the head.

5. The combination with a truck comprising wheels and a frame, of brake levers, hangers suspended from said frame, and a brake head having an arm extending laterally and in advance, and connections between the brake head and arm and said hangers.

6. The combination with a truck comprising wheels and a frame, of brake levers, sets of hangers depending from the upper frame member, and a brake head having an arm directly connected to the shoe and extending laterally and in advance of the head, the head being supported by one set of said hangers and the arm by another set.

7. The combination with a truck comprising wheels and a frame, of two sets of hangers for each brake head, two brake heads each consisting of a head proper and an arm extending laterally and in advance, one set of hangers for each head being longer than the other set, a pivotal connection between each brake head and a set of longer hangers, and a pivotal connection between each brake arm and a set of shorter hangers, brake levers carried by the frame and connected respectively with each brake head.

8. The combination with a truck comprising wheels and a frame, of outer hangers substantially in line with the side member of the frame and inner hangers within the frame member, and a brake head comprising a head proper connected with said inner hangers and having an arm directly connected to the sleeve and extending laterally and in advance and connected with the outer hangers.

In testimony whereof, I affix my signature.
THOMAS ELLIOTT.