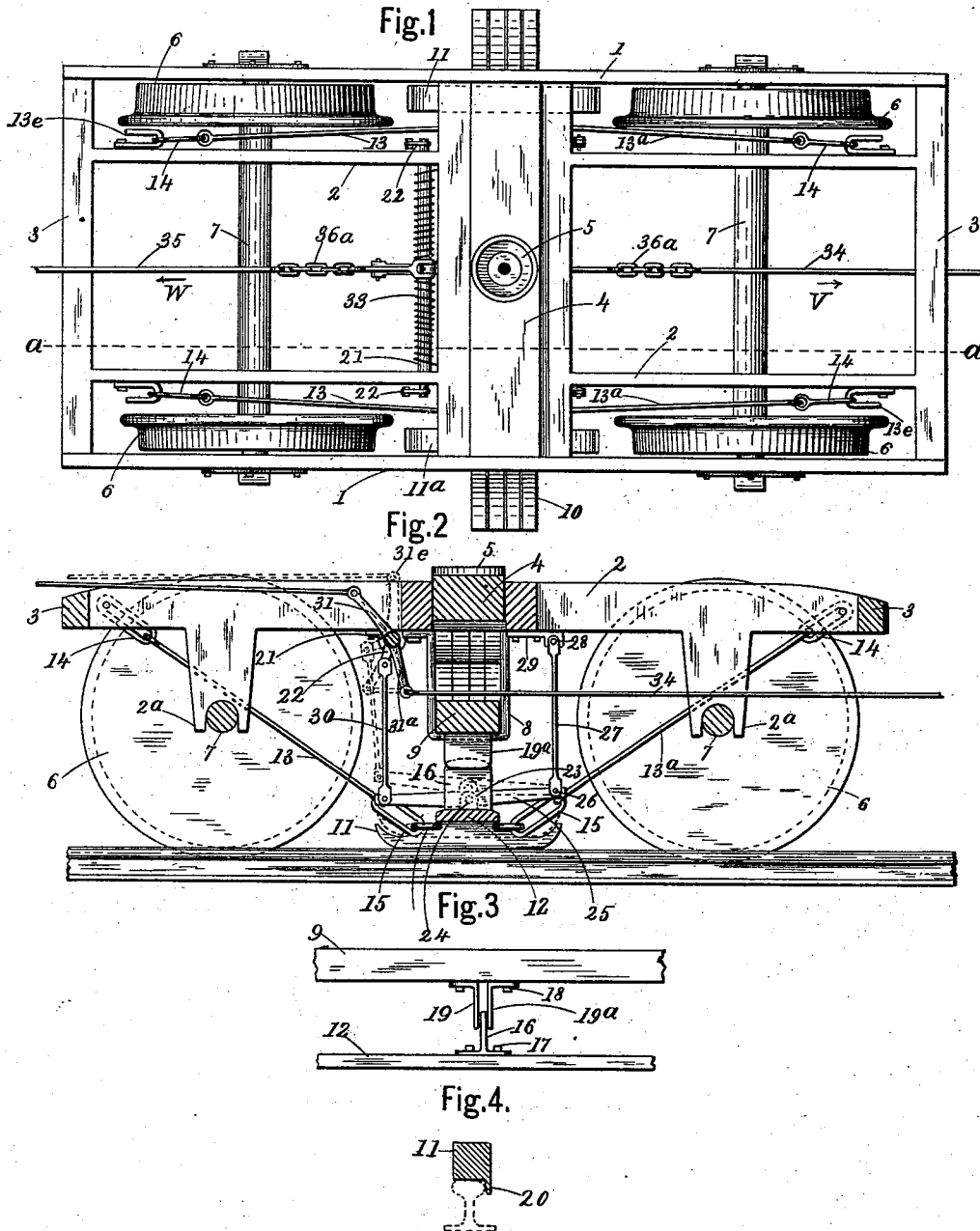


(No Model.)

A. F. LETSON.
BRAKE FOR RAILWAY CARS.

No. 531,319.

Patented Dec. 25, 1894.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BRAKE FOR RAILWAY-CARS.

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To all whom it may concern:

Be it known that I, AUGUSTUS F. LETSON, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Railroad-Car Brakes, of which the following is a specification.

My invention relates to a new and improved railroad car brake, in which the brake shoes operate upon the track instead of the wheels, so as to avoid the tendency of the wheels to slide upon the track, and cause the wearing of flat places in the periphery or tread, thereby rendering the wheel unfit for use until removed and turned up in the lathe.

My invention also relates to certain details of construction by which it is rendered more simple and effective, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1, is a top or plan view of a railway truck, showing my invention connected thereto. Fig. 2, is a side sectional elevation in or about line *aa*, Fig. 1. Fig. 3, is a front elevation of a detached portion of the mechanism for keeping the brake shoes from moving laterally. Fig. 4, represents a cross section through a brake shoe, showing a slight modification in its form, all parts beyond the section being omitted.

Referring to the drawings in detail, 1 represents the outside longitudinal side frame pieces of the truck, 2 the inner side frame pieces, and 3 the end cross frame-pieces. The central cross beam 4, is provided with the usual center socket rest 5, all parts of this frame being constructed in the usual and well known way.

The car wheels 6, are all mounted in the usual boxes. The axle 7, the intermediate longitudinal frame bars 2 and the portions 2^a, that straddle the axle are also of the ordinary construction.

The numeral 8, (see Fig. 2) represents the yoke that supports the lower cross beam 9, in place, and 10, represents the elliptic springs that are interposed between the cross beams 4 and 9.

The brake shoes 11 and 11^a, are rigidly secured to a cross beam 12, shown in Fig. 2, and each shoe is suspended by the rods 13, 13^a

and links 14 and 15, so that the shoes, (and the cross beam to which they are connected) can be moved up or down without getting out of place. To keep them from moving laterally to one side or the other, an upward projecting piece 16, is rigidly secured by bolts 17, to the cross beam 12, and to the under side of the beam 9, is secured by bolts 18, two downward projecting portions 19, and 19^a, see Fig. 3, between which the portion 16, moves up or down but not laterally. If desired the brake shoes may be provided with a downward side flange 20. See Fig. 4. A crank shaft 21, is mounted in boxes on the under side of the longitudinal beams 2, and is provided with a crank arm 22, rigidly secured at each end of said shaft. At each side of the center or near each end of the holding piece 23, shown by dotted lines in Fig. 2, and between each of the forked holding portions is pivoted by pins 24, (one of which is also shown by dotted lines in said Fig. 2) an arm 25, having one end pivoted by a pin 26, to a connecting arm 27, having its opposite end or upper end, pivoted by a pin 28, to a fixed or stationary support 29. The opposite ends of the arms 25, are pivoted to the lower ends of the connecting rods 30, having their upper ends pivoted to the crank arms 22.

A double brake operating arm 31 and 31^a, is mounted on the crank shaft 21, to which it is rigidly secured. This arm is held in a substantially vertical position (as shown by the dotted lines 31^a, Fig. 2) by a spiral spring 33, shown in Fig. 1, the spring being fitted on the shaft 21, in the usual way for such purposes. To the portion 31^a, of the arm is pivoted a connecting rod 34. The end of this rod is adapted to connect with an air brake of any well known construction. At the opposite end or upper portion 31, of the arm is pivoted another connecting rod 35. This rod 35, is adapted to be connected with any well known brake operating apparatus designed to operate the brake by hand. The object of this construction is to provide a suitable means whereby the brake can be operated either by hand or by the air brake apparatus.

To prevent the moving of the air brake rod 34, while operating the hand brake mechanism I introduce a few links of chain 36—36^a, into both connecting rods, so that when op-

erating one of the brake rods, the brake rod 34, for instance, which in setting the brakes is moved in the direction of the arrow V, this will cause the lower arm 31^a to move in the opposite direction, and cause a slack in the chain 36^a, without moving the rod 35, and vice versa.

The operation of the invention will be clearly understood from the foregoing description and drawings. By drawing the brake rod 35, in the direction of the arrow W, the arm 31—31^a, is turned from the position shown by the dotted lines 31^c, to the position shown at 31 and 31^a. This operation causes the crank arms 22, to turn downward and force the arms 30 down with them, thereby lowering the brake shoes and forcing them to the track, and in a case of great emergency a whole train may be almost supported on the brake shoes, thereby stopping it in the shortest possible time.

I claim as my invention—

1. In a rail road car brake, the combination with the truck of a pair of brake shoes, rigidly connected to a cross bar and suspended by upward yielding supports connected with

the truck frame, rock arms, pivoted centrally to the cross bar, and each having one end pivoted to suspended arms having their upper ends pivoted to stationary supports, pivoted arms at the opposite ends of the rock arms having a connection with a crank shaft and means substantially as above described for setting or operating the brake shoes.

2. In a rail road car brake, the combination with a railway truck of a pair of brake shoes, secured to a cross-bar and suspended by upward yielding links to the truck frame, rock arms pivoted to the cross-bar each having one of their ends pivoted to a horizontally movable support and their opposite ends pivoted to arms connected to crank arms, a spring for holding the brake shoes up from the rails and means connected with a double arm mounted on a crank shaft for operating the brake from both ends of the car, substantially as described.

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Witnesses:

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