(No Model.)

J. A. HUGHES.

BRAKE FOR STREET OR RAILWAY CARS.

No. 597,772. Patented Jan. 25, 1898.

Fig. 1.

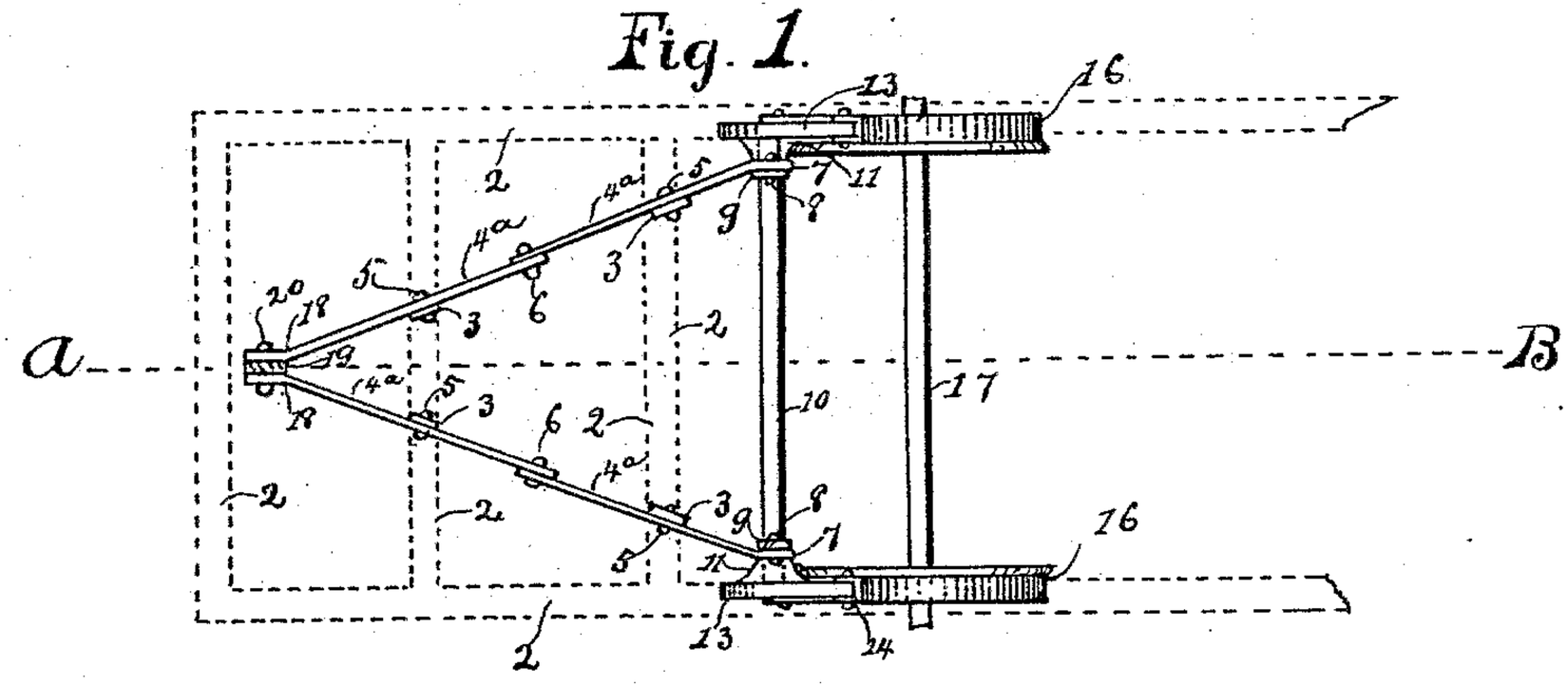

Fig. 2.

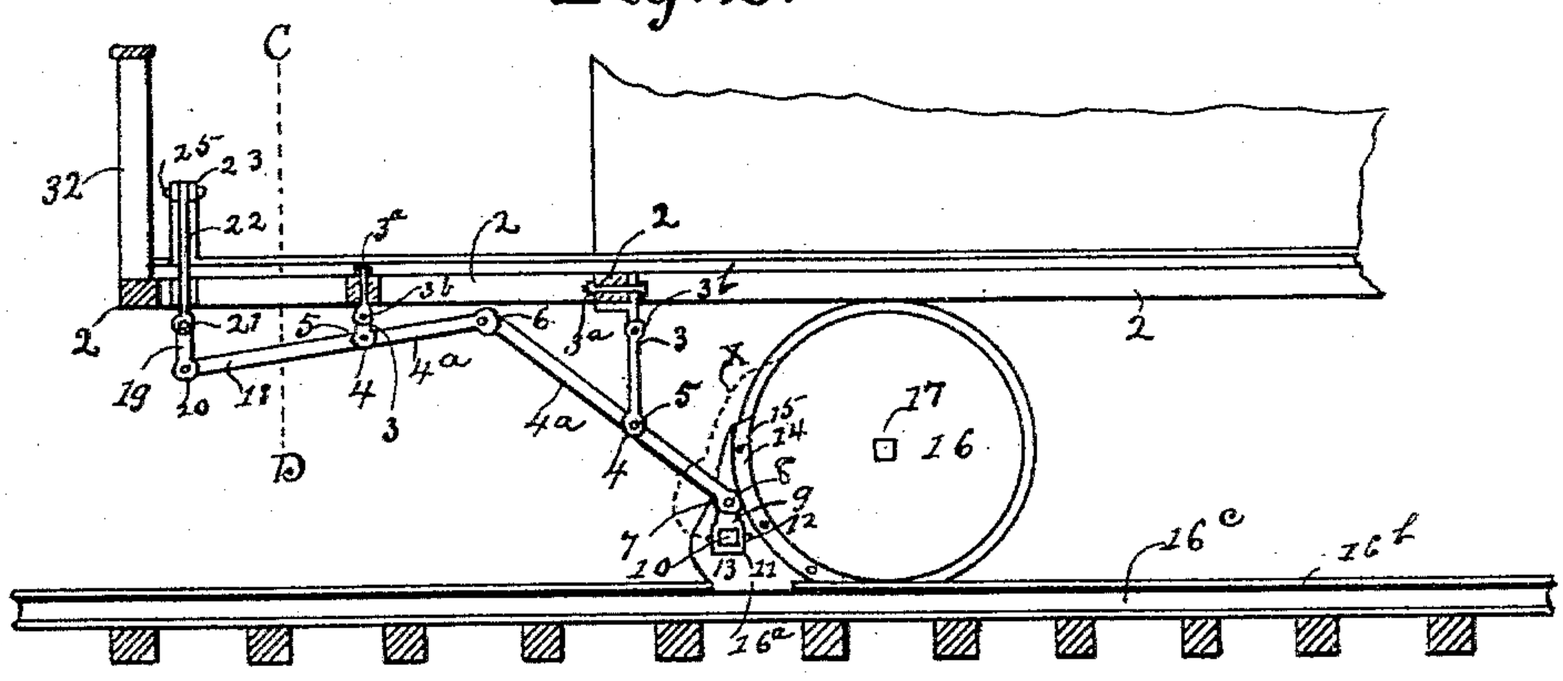

Fig. 3.

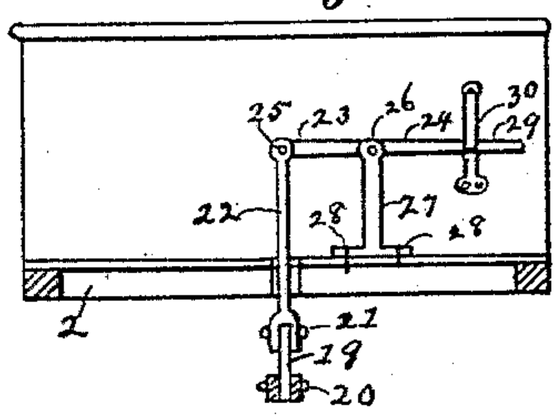

Fig. 4.

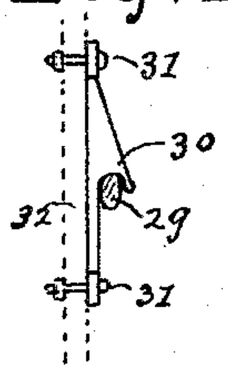

Fig. 5.

Attest
William S. Conney
W. T. Clark

Joel A. Hughes
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per L. H. Lewis Atty.

UNITED STATES PATENT OFFICE.

JOEL A. HUGHES, OF DALLAS, TEXAS.

BRAKE FOR STREET OR RAILWAY CARS.

SPECIFICATION forming part of Letters Patent No. 597,772, dated January 25, 1898.

Application filed October 15, 1897. Serial No. 655,301. (No model.)

To all whom it may concern:

Be it known that I, JOEL A. HUGHES, a citizen of the United States of America, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Improvement in Brakes for Street or Railway Cars, which is fully described in the following specification and illustrated in the accompanying drawings, which form a part of this specification.

Figure 1 is a plan view of the device complete. Fig. 2 is a longitudinal section through Fig. 1, as per dotted line from A to B. Fig. 3 is a transverse section through Fig. 2, as per dotted line from C to D, showing the construction to the left of said dotted line. Fig. 4 is a side view of the lever-hook. Fig. 5 is a perspective view of the brake as it is applied to the car-wheel and the track.

Similar numerals of reference refer to similar parts throughout the several views.

The numeral 2 constitutes the framework of the car constructed in the ordinary way. To this framework is secured (by bolts 3^a) a system of hanger-bars 3, provided with working joints 3^b, at the lower ends of which are provided the bearings 4 for a system of levers 4^a, the levers and the ends of hanger-bars being attached to each other by bolts 5. The middle ends of the system of levers are attached to each other by bolts 6, while the ends 7 are attached by bolts 8 to the upper ends of cuffs 9, which carry the brake-beam 10, the two ends of which are rigidly secured in the flange-socket 11, (by bolts 12,) which is rigidly secured to the two brake-blocks 13. To the outer edge of the brake-blocks is secured a friction-shoe 14, (by bolts 15,) which engages the periphery of the car-wheel 16, which is secured to axle 17. The brake-block is also provided with a flange 16^a, made secure to its lower edge, which engages the upper flange 16^b of the rail 16^c. The ends 18 of the levers 4^a are attached to link 19 by bolt 20, while the upper end of the link is attached (by bolt 21) to the hoisting and lowering rod 22, the uppermost end of which is attached to the fulcrum end 23 of the lever 24 by bolt 25, said lever having the bearing 26 on the uppermost end of standard 27, which is secured to the floor of the platform of the car by bolts 28. The handle of the lever 29 is received in the hook 30, which is made fast by bolts 31, which are secured to the spatter-board 32 of the car.

As to the operation of my device, when the handle of the lever 29 is secured in the hook 30, as shown in Fig. 3, the brake-block 13 will be raised to its highest point, as shown in Fig. 2, as per dotted line X, where it will remain out of use except on such occasion as it will be required that the car or cars be stopped in the shortest space of time possible to prevent an accident. When necessity demands that the brakes shall be used, the handle of the bar 29 is borne downwardly sufficient to release it from the hook, and so soon as the downward pressure is relieved the fulcrum end of the lever will pass downwardly, allowing the brake-block to descend to its lowest point, its lower edge resting on the rail and the shoe binding a portion of the periphery of the car-wheel.

It is known to me that there are other brakes now in use which stop the impetus of the cars forward by being applied to the periphery of the wheels, but none of them are so arranged that they can be lowered to the track and possessing the double qualities of creating friction in the periphery of the wheels and at the same time extending sufficiently under the wheels to act as a scotch, nor do they possess so much area of frictional surface as is offered in the frictional surface of the shoe secured to my brake. The brake-shoes when worn can be taken off and replaced with new ones. To prevent the possibility of the wheels being derailed when the brakes are suddenly lowered, the flange 16^a is placed on the brake-block to act in concert with the effect created by the flange of the car-wheel, which is on the opposite side of the rail from the flange 16^a.

Having described all that is necessary for a clear understanding of my device, what I claim, and desire to secure by Letters Patent of the United States, is—

The combination of a brake for street-cars and railway-cars, having a system of hanger-bars 3, (provided with working joints 3^b) secured to the framework of the car, by bolts 3^a, the lower ends of hanger-bars provided with bearings 4, which engage a system of levers 4^a, the middle ends of which being attached to each other by bolts 6, while the ends

7 are attached by bolts 8 to the upper ends of cuffs 9, which carry the brake-beam 10 to the ends of which are suitably secured the brake-blocks 13, provided with a shoe 14 (secured to said block by bolts 15), with a flange 16^a secured to the lower edge of the block, and with a link 19 attached to the ends of the levers by bolts 20 and to the hoisting and lowering rod by bolts 21, said hoisting and lowering rod engaging at the uppermost end the fulcrum end of the lever 24, provided with the standard 27 and bearing 26; all for a purpose as substantially set forth.

JOEL A. HUGHES.

Attest:
WILLIAM A. CORNEY,
W. T. CLARK.