2 Sheets—Sheet 1.

R. D. CHATTERTON.

RAILWAY-CAR BUMPER.

No. 191,404. Patented May 29, 1877.

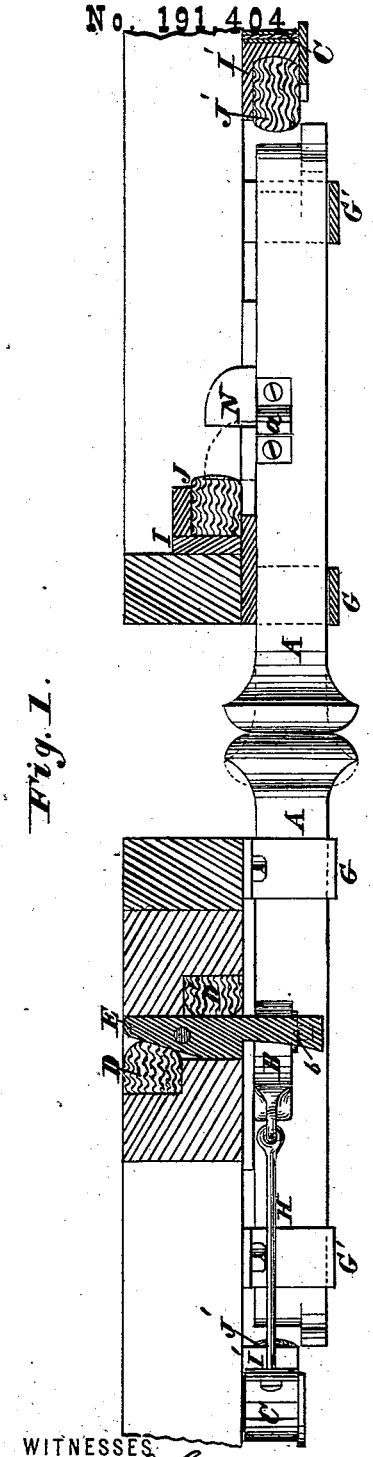

Fig. 1.

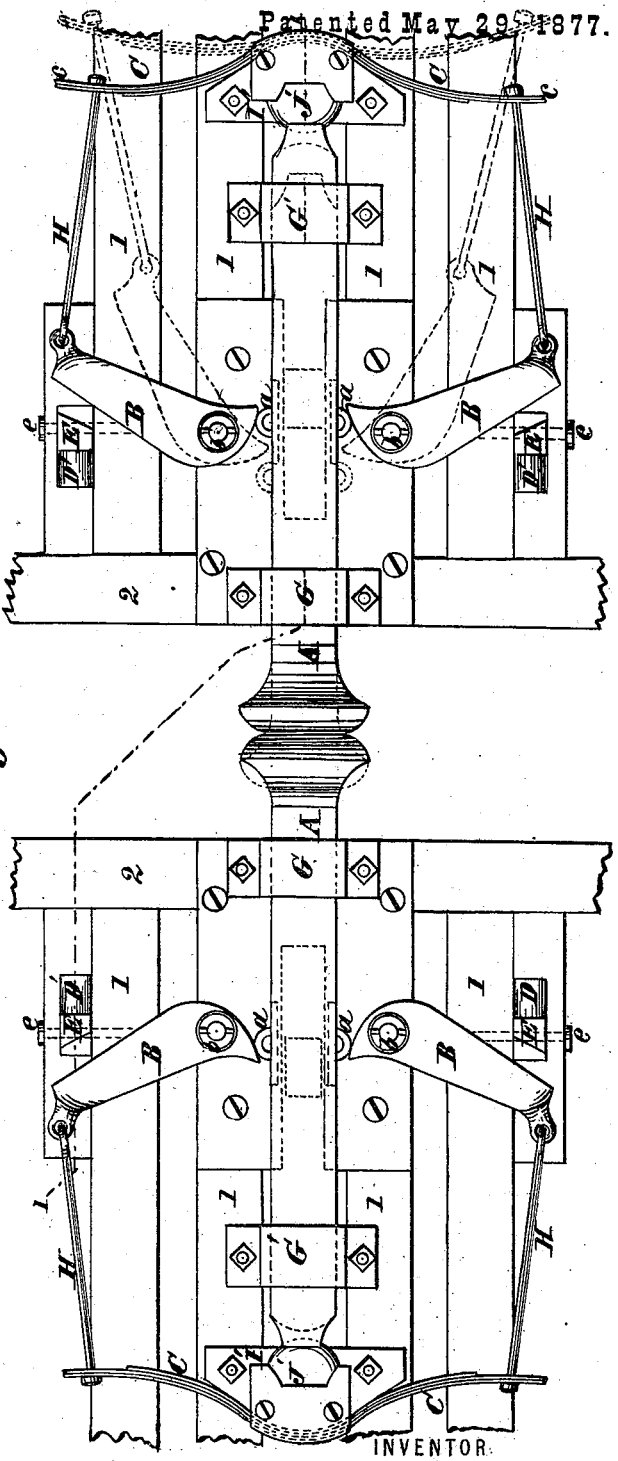

Fig. 2.

WITNESSES.

Chas. J. Goode

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INVENTOR.

Richard D. Chatterton.

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2 Sheets—Sheet 2.

R. D. CHATTERTON.

RAILWAY-CAR BUMPER.

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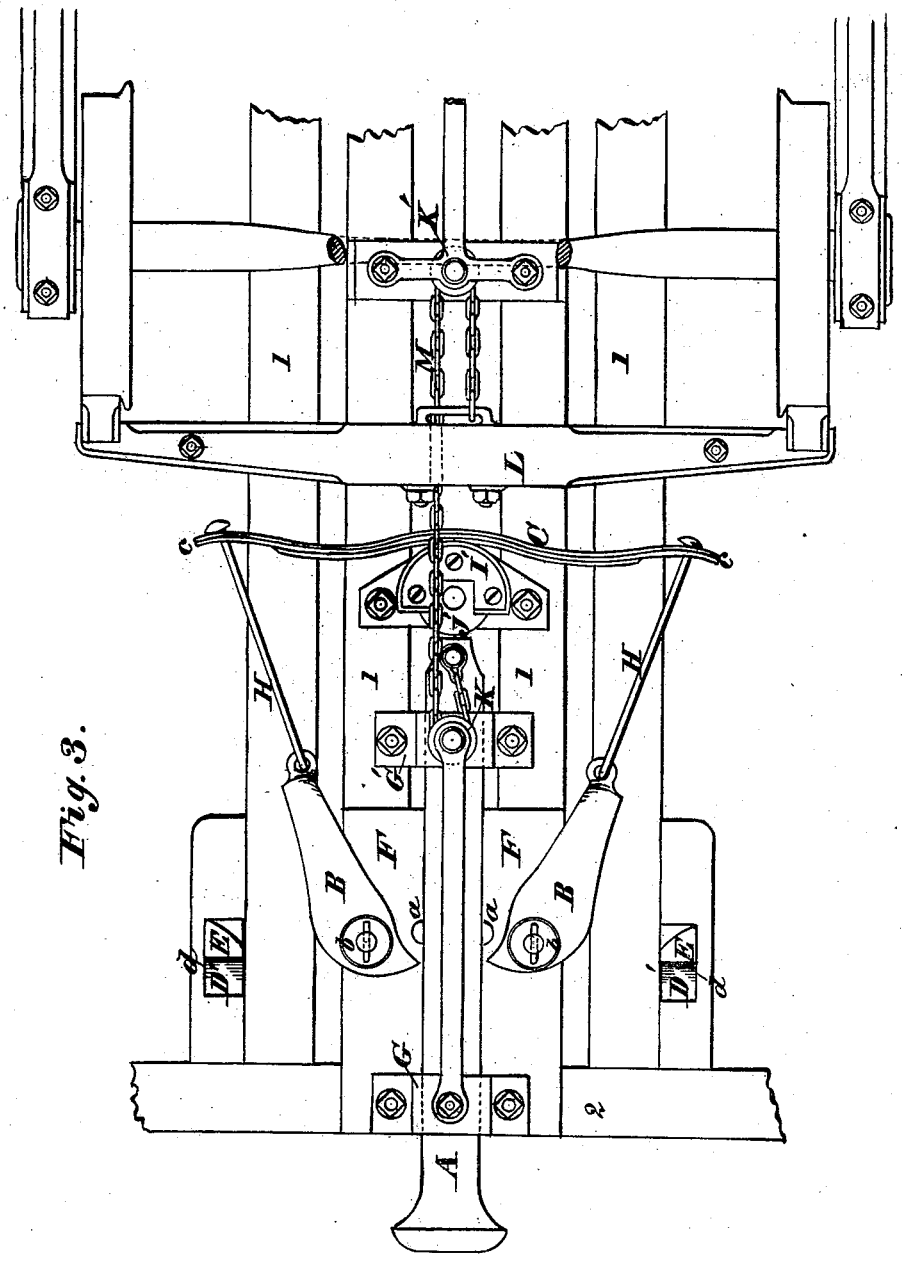

Fig. 3.

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INVENTOR
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UNITED STATES PATENT OFFICE.

RICHARD D. CHATTERTON, OF COBOURG, ONTARIO, CANADA.

IMPROVEMENT IN RAILWAY-CAR BUMPERS.

Specification forming part of Letters Patent No. **191,404**, dated May 29, 1877; application filed March 31, 1877.

To all whom it may concern:

Be it known that I, RICHARD DOVER CHATTERTON, esquire, of the town of Cobourg, in the county of Northumberland, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in the Construction of Railway-Car Draw-Bars, Springs, and Brake-Movements; and I do hereby declare that the following is a clear and exact description of the same.

My said improvements consist in the use of a wedge or wedges, attached to and forming part of the draw or buffing bar of a railway-car, on either side, so that at the point of contact the bar itself becomes a wedge, resting in normal position against and between the inner and shorter arms of two horizontal transverse levers affixed to the car-frame, the outer and longer arms of which levers bear or haul upon the springs, adapted in such manner that when, by pressure of an attacking train or car, the bar is forced inward, said levers, turning upon their fulcra, open to receive it until the wedge has passed through with an elastic protective resistance proportionate to the leverage obtained and strength of the springs, when, by action of said springs, the levers return to their normal position, and the cars are saved from the damaging consequences of a recoil.

My improvements further consist in providing improved means for the direct attachment of the brake-beam to the draw-bar, so that when the draw-bar is pressed inward it applies the brakes to the wheels.

In the accompanying drawings, Figure 1 is a vertical longitudinal section on the line 1 1, Fig. 2, showing the application of my improved device to the opposing ends of two cars. Fig. 2 is an under-side view of the same. Fig. 3 is a like view, showing the brake-operating mechanism more fully.

1 2 may represent, respectively, the longitudinal and transverse bars of a car-bed. A is a draw-bar, secured in any suitable manner to the frame, and having a wedge or enlargement, *a*, on each side thereof. B are levers, fulcrumed, by pivots *b*, to the frame on each side of the draw-bar.

Secured at the rear of the block I′ is a spring, C, having its free ends *c* connected to the rear extremities of the levers B by rods H. The block I′ contains a spring, J′, adapted to receive the blow of the draw-bar. A slot, *d*, on each side of the frame, forms a receptacle for a vertical lever, E, pivoted therein, and provided with a cushion or spring, D, on one side, above the pivot *e*, and a cushion or spring, D′, on the other side, below the pivot.

F represents plates, through which the levers B may be pivoted to the frame.

G G′ are straps or bands, by which the draw-bar is held to the frame.

The rear strap G′ forms vertical bearings for a sheave, K, around which a chain or rope, M, passes to another sheave, K′, for the direct attachment of a brake-beam, L, with the draw-bar, so that, when pressure is applied to the draw-bar, the force is communicated directly to the brake-beam.

Above the draw-bar is a projection, N. This projection limits the movement of the draw-bar outwardly by coming in contact with a cushion or spring, J, secured within a block, I, at the rear of the transverse bar 2 of the frame.

The power of the spring C is sufficient to withstand ordinary pressure produced by the backing of the cars, the wedges or enlargements *a* of the draw-bar pressing upon the inner ends of the levers B, whose free ends are connected by rods H with the said spring, and the projection N being in contact with the cushion J.

Should unusual pressure be brought to bear upon the draw-bar by a too sudden stoppage of the train, the spring C will bend sufficiently to permit the wedges or enlargements *a* to pass to the points *f* of the levers B, whose extremities will be caused to bear on the vertical levers E, at the same time applying the brakes to the wheels.

If the train is brought suddenly to a stand-still by collision or other cause, the wedges *a* will be forced past the levers B, and the rear end of the draw-bar will come in contact with the spring J′, and any recoil will be confined between the inner faces of the levers B and said spring, the brakes being rigidly held to the wheels.

The position that the parts assume upon sudden stoppage of the cars is shown in dot-

ted lines in Fig. 2, and the position in case of collision or any cause bringing the cars to a sudden stand-still is shown in Fig. 3.

The levers B are curved on their inner faces to allow the levers to be readily returned to their normal position past the wedges of the draw-bar, so as to permit the latter to pass outward.

I am aware that it is not new to connect a draw-bar with a brake-beam, so as to communicate pressure on the former to the brakes, and therefore I do not claim the provision of such means, broadly.

Having now fully described my said invention, what I claim as new therein, and desire to have protected by Letters Patent, as prayed for in my petition, is—

1. The wedged draw or buffing bar A of a railway-car, in combination with levers B B, bearing upon springs C by intermediate connections, adapted so as to increase their power and range, substantially as above described.

2. The combination of the buffer or draw bar A, levers B B, springs C, supplementary springs D, and intermediate levers E, substantially as set forth.

3. The combination of draw-bar A, sheaves K K′, and chain M, for the direct attachment of the brake-beam to the draw-bar, as set forth.

R. D. CHATTERTON.

Witnesses:
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ROE BUCK.