

(No Model.)

2 Sheets—Sheet 1.

G. T. HALL.

COMBINED STREET CAR FENDER AND BRAKE.

No. 446,227.

Patented Feb. 10, 1891.

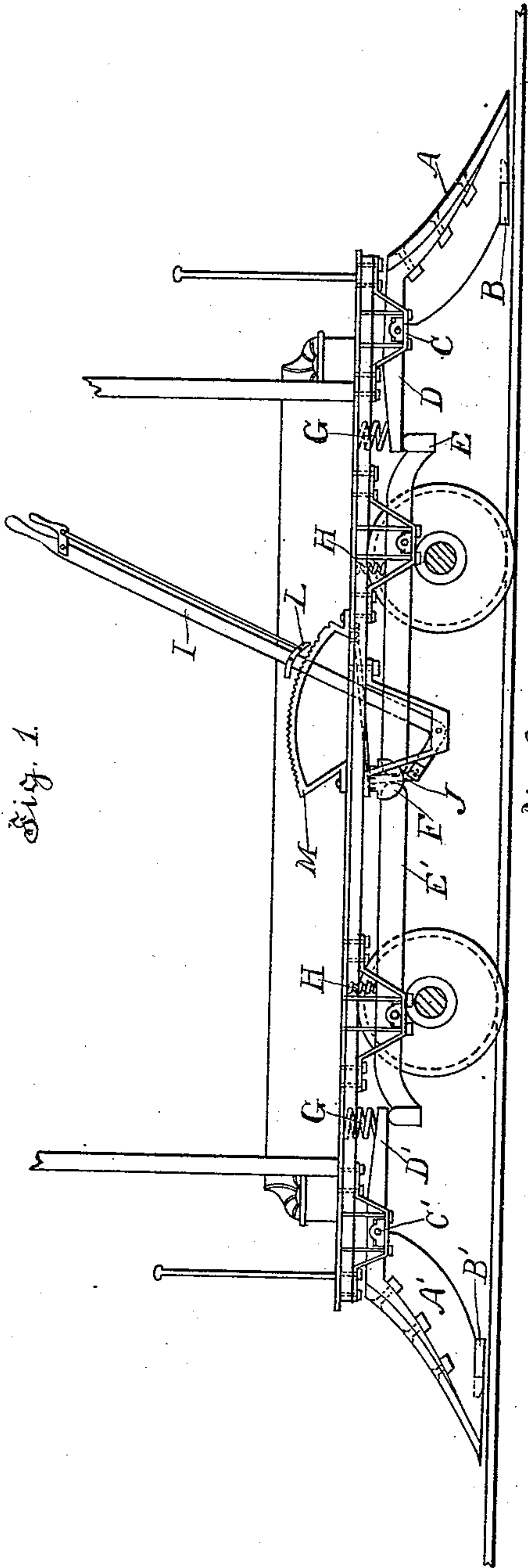


Fig. 1.

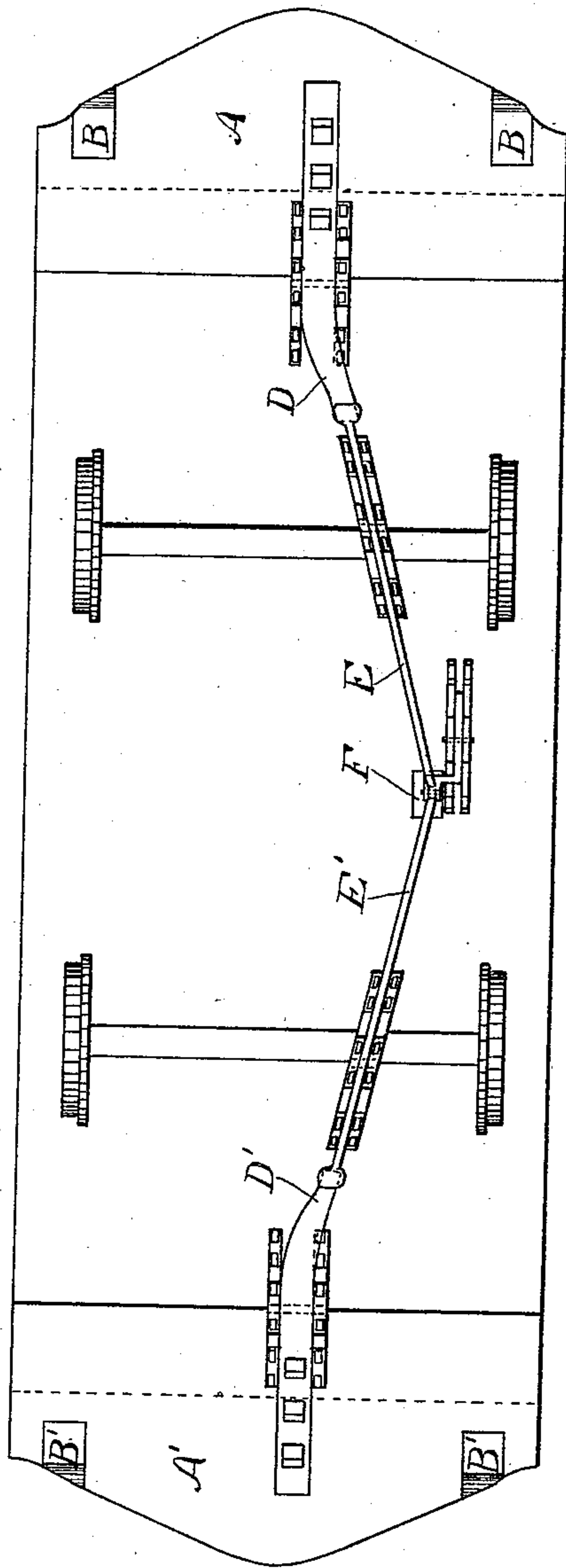


Fig. 2.

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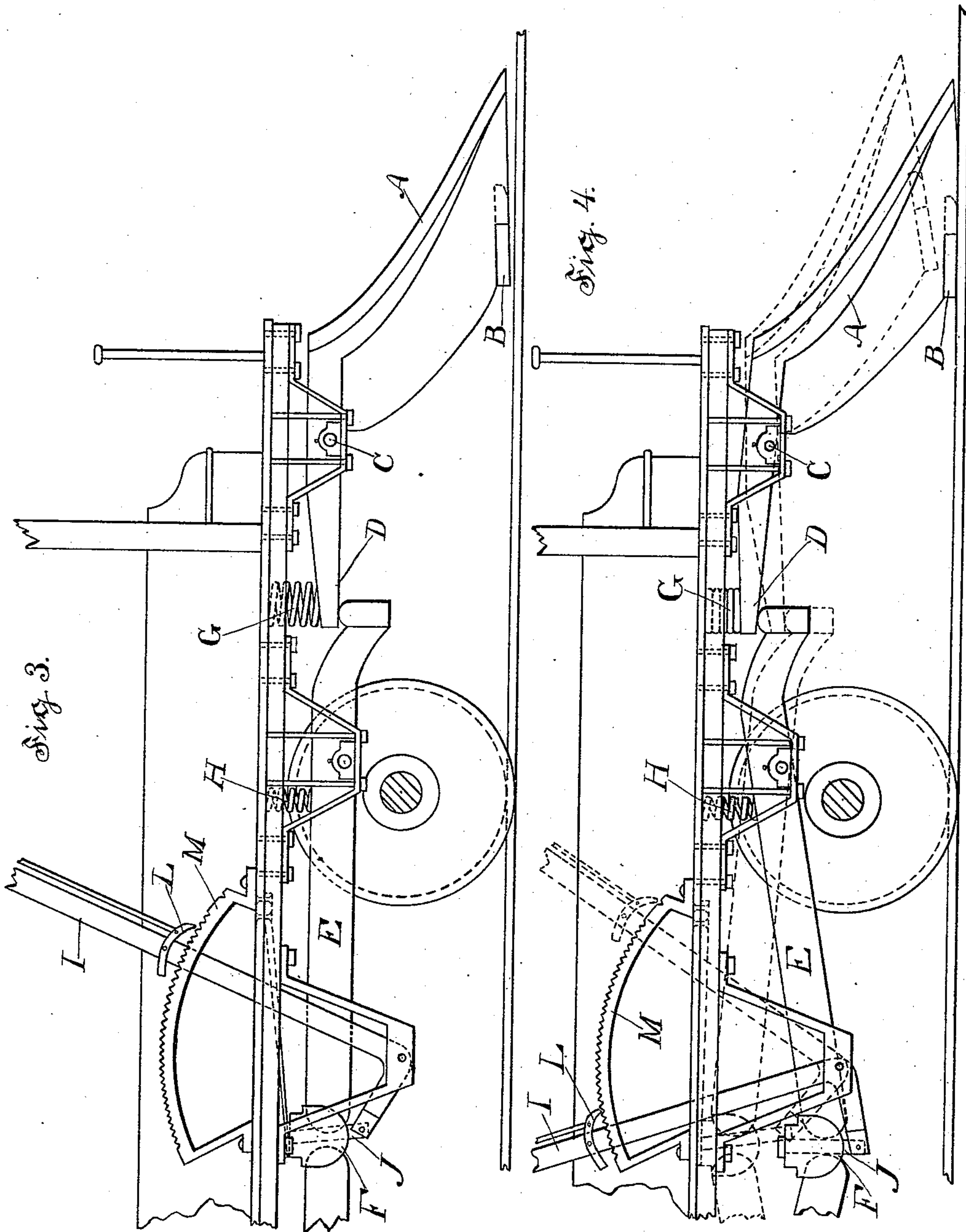
(No Model.)

2 Sheets—Sheet 2.

G. T. HALL.
COMBINED STREET CAR FENDER AND BRAKE.

No. 446,227.

Patented Feb. 10, 1891.



Witnesses
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Inventor
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UNITED STATES PATENT OFFICE.

GEORGE T. HALL, OF MONROVIA, ASSIGNOR OF ONE-HALF TO E. F. SPENCE,
OF LOS ANGELES, CALIFORNIA.

COMBINED STREET-CAR FENDER AND BRAKE.

SPECIFICATION forming part of Letters Patent No. 446,227, dated February 10, 1891.

Application filed August 9, 1890. Serial No. 361,546. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. HALL, a citizen of the United States, residing at Monrovia, in the county of Los Angeles and State of California, have invented a new and useful Combined Street-Car Fender and Brake, of which the following is a specification.

My invention is specially adapted for use on the dummies of cable railways. It frequently occurs in railways of this description that sudden dips and rises are made in the track, and in consequence rigid fenders are found to be impracticable, as they become broken by contact with the road at such places. It has been proposed to hinge the fenders to the dummy; but this also has been found impracticable, because the fender is liable to be thrown upward when it comes into contact with a person fallen upon the track, and therefore passes over such person instead of removing him from the track.

The object of my invention is to provide means whereby both of the above-mentioned objections are overcome.

A further object is to increase the utility of the device by adapting it for use as a brake.

My invention comprises the combination of the car, a rigid forwardly-extending fender secured to the front part of the car and arranged for vertical movement and provided with brake-shoes, and mechanism for operating the forward portion of the fender vertically to raise it above the track and to force it down to press the brake-shoes upon the track.

It also comprises other elements and combinations of elements hereinafter more fully set forth.

The accompanying drawings illustrate my invention; but it is to be understood that I do not limit my claim to the exact construction shown, for there are numerous modifications of the operating mechanism which will suggest themselves to mechanics.

Figure 1 shows a car or dummy in longitudinal mid-section provided with my combined fender and brake, the operating mechanism of which is shown principally in plain side elevation. Fig. 2 is a plan view of the same as viewed from the under side of the car. Fig. 3 is a sectional view on a larger scale, showing the fender and brake in its

normal position. Fig. 4 is a like view showing the fender and brake in operation as it is designed to be used in stopping a car in case of danger or on any other occasion. Dotted lines show the position of the fender when raised in passing over a rise in the track.

A is the forwardly-extending fender provided with the rail-engaging brake-shoes B, arranged to fit upon the rails when the fender is fully depressed to stop the car. The fenders are pivoted to the car by pivots C at the rear end of the fender, and each is provided with the rigid rearwardly-projecting lever or arm D, arranged to be engaged by suitable operating mechanism for controlling the vertical movement of the fender. Such mechanism, as shown, comprises a pivoted lever E engaging the rear end of arm D, and in turn being engaged by a presser-bar F, which is connected with a suitable lever I, accessible to the gripman or other operator. This presser-bar may be arranged to be operated by foot or by hand, as may be desired, without changing the principle of my invention.

G is a balancing-spring arranged to engage the arm D and hold the fender in a normal position, sufficiently elevated above the track to prevent friction. I prefer the fender to be held normally about an inch above the track. H is a return-spring arranged to operate against the action of the balance-spring G and to hold the lever E steadily pressed thereagainst. The weight of lever E tends to serve the same purpose.

I is a pivoted hand-lever arranged with intermediate connections J to operate the presser-bar F vertically. It is provided with a pawl L, which engages with a ratchet-bar M to hold the hand-lever in the desired position. It is designed that when the lever is set at its normal position, as shown in Fig. 1, it will allow a limited upward movement of the bar F to permit the fender to move upward upon contact with a rise in the track.

The operation is as follows: When the operating-lever is in its normal position, the fender is elevated a suitable distance above the track, and in case any rise occurs in the track the front end and shoes of the fender, which are slightly curved or inclined upward for this purpose, slip upward along the incline of the track, and since the fender is piv-

oted to allow of such movement the spring G is compressed and allows the fender to accommodate itself to the incline. When the grade again becomes uniform, the spring returns the fender to its normal position. In case any person or obstruction should be seen on the track the operator immediately draws back the hand-lever I, thus forcing the front end of the fender down and preventing the person or object from forcing up the front end of the fender. The parts are so arranged that this movement of the lever forces the fender down with the shoes upon the rails, thus applying a track-brake to stop the train, so that the one movement insures proper and positive action of the fender and also serves to stop the train.

In Fig. 1 the car is provided at each end with a fender, and by the means provided both fenders may be operated simultaneously, thus bringing the track-shoes B at each end of the car into contact with the rail, so that if sufficient force is exerted upon the hand-lever I the car-wheels may be raised from the track and the car supported wholly by the brake-shoes. In the drawings the parts at one end of the car are distinguished from the like parts at the other end of the car by means of an indice.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the car, a forwardly-extending fender provided with the arm and with the rail-engaging brake-shoes and pivoted to the car to allow vertical movement of

such fender and shoes, and mechanism arranged to engage such arm to operate the fender vertically, as and for the purpose set forth.

2. The combination of the car, a forwardly-extending fender provided with the rigid arm and pivoted to the car to allow vertical movement of such fender, and mechanism arranged to engage such arm to operate the fender, substantially as and for the purpose set forth.

3. The combination of the car, the fenders pivoted thereto, one at each end thereof, and respectively provided with the brake-shoes and the rigid arm, and mechanism arranged to engage such arms, substantially as and for the purpose set forth.

4. The combination of the car, a forwardly-extending fender pivoted to the car and provided with the arm, the balancing-spring arranged to engage the arm, the pivoted lever arranged to engage the arm, and mechanism arranged to operate the lever.

5. The combination of the car, a forwardly-extending fender pivoted to the car and provided with the arm, the balance-spring arranged to engage the arm, the pivoted lever arranged to engage the rear ends of the arm, and the presser-bar arranged to engage the pivoted lever, the hand-lever, and intermediate connections connecting the hand-lever and presser-bar.

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Witnesses:

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