

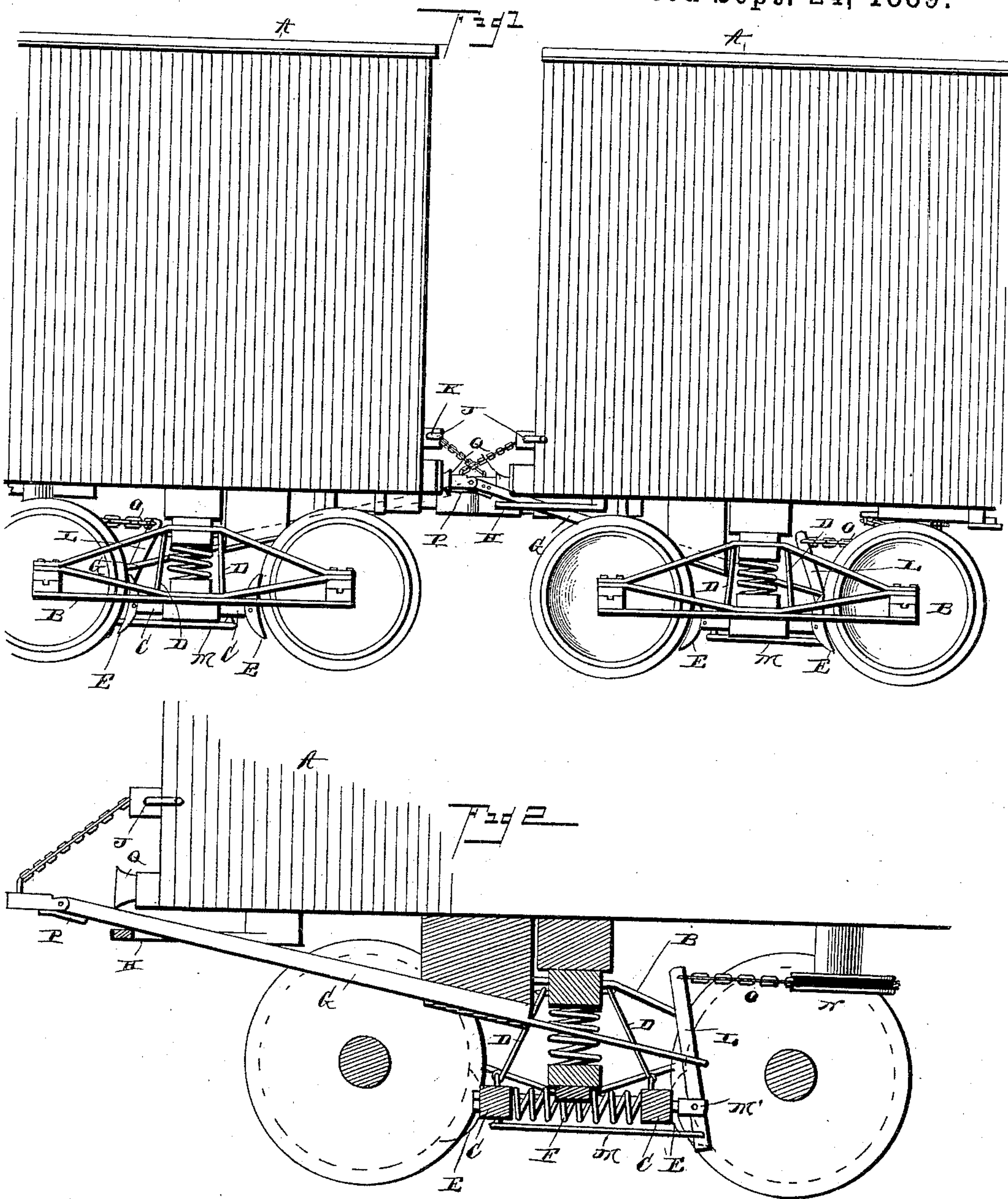
(No Model.)

2 Sheets—Sheet 1.

J. F. DURKIN.  
AUTOMATIC CAR BRAKE.

No. 411,547.

Patented Sept. 24, 1889.



Witnesses

*Johnnie*

Inventor

*James F. Durkin*

By his Attorneys,

*R. H. Bishop*

*C. A. Snow & Co.*

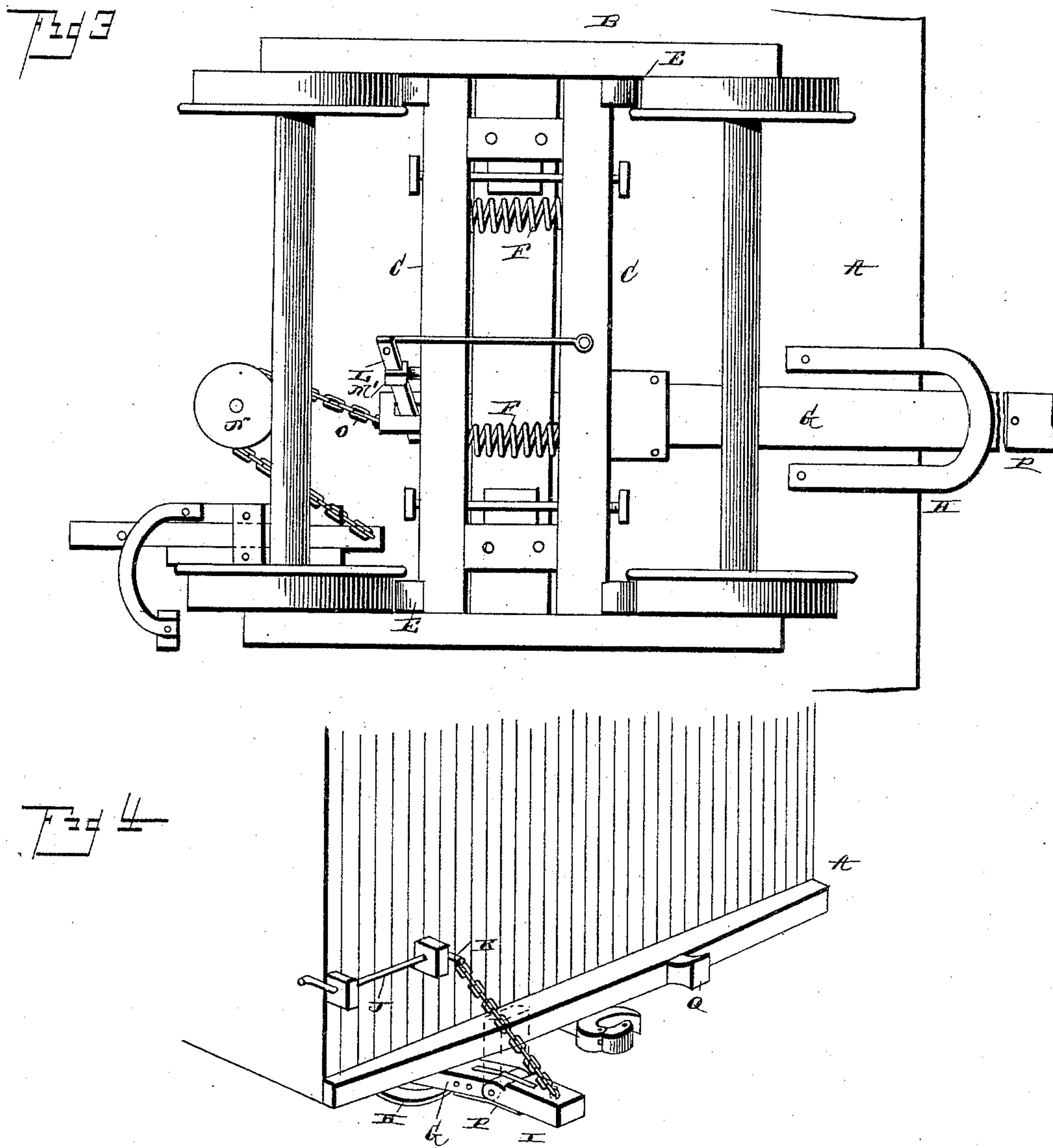
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# UNITED STATES PATENT OFFICE.

JAMES F. DURKIN, OF SCOTTTDALE, PENNSYLVANIA.

## AUTOMATIC CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 411,547, dated September 24, 1889.

Application filed May 31, 1889. Serial No. 312,711. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. DURKIN, a citizen of the United States, residing at Scottsdale, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Automatic Car-Brake, of which the following is a specification.

My invention relates to improvements in automatic car-brakes; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of the ends of two cars provided with my improved brake. Fig. 2 is a sectional view of the same with the brakes applied to the wheels. Fig. 3 is a bottom plan view, and Fig. 4 is a detail perspective view of the end of the car and the push-bar.

The car A and the truck B may be of the usual or any preferred construction, and the brake-beams C are suspended on the truck by the hangers D in the ordinary manner. The brake-shoes E are secured to the ends of the brake-beams and the said beams are normally drawn toward each other by the springs F, arranged between the beams near the ends of the same.

On the bottom of the car I mount the sliding rods or push-bars G, which are arranged near the opposite sides of the car and move in bearings H, which consist of metallic straps secured to the bottom of the car and projecting beyond the end of the car. On the outer ends of these sliding rods or push-bars I pivot the bumper-heads I, which are adapted to be turned downward, as shown in Figs. 1 and 2, when the device is in use, and when not in use are turned up, as shown in Fig. 4 in dotted lines, out of the way. In order that these bumper-heads may be operated from the side of the car, I provide the rock-shaft J, which is journaled in suitable bearings on the end of the car and is provided at its inner end with a crank-arm K, adapted to act on the bumper-head. The inner ends of the push-bars are pivoted directly to the upper ends of levers L, which are connected to the brake-beams, each push-bar being thus connected to the adjacent truck. The lever L is connected to one of the brake-beams by a

link M, having its rear end pivoted to the brake-beam and its front end pivoted to the front end of the lever, and the lever is pivoted at an intermediate point of its length to a knee or casting M' on the adjacent beam.

When it is desired to apply my improvement to the brake now in use, a pulley N is arranged on the under side of the car and the push-bar is connected to the lever by a chain O, running around said pulley and having its ends secured to the push-bar and the lever.

In order that the bumper-head may not turn on its pivot too easily, I provide the spring P, which is secured to the push-bar and bears upon the bumper-head. A block Q is secured to the end of the car and receives the blow of the push-bar in the act of coupling.

When the parts are in their normal position, the sliding rod projects forward and the brake-shoes are off the wheels. Should the engine be reversed, however, and the front portion of the train consequently caused to back, the ends of the cars will strike against the bumper-heads, so as to push the same and the push-bars rearward, thereby vibrating the lever, so as to apply the brake-shoes to the wheels.

It will be observed that each brake-beam acts as a fulcrum to cause the lever to act on the other beam. When the upper end of the lever is carried in one direction by the push-bar, the lower end is moved in the opposite direction to apply the off-beam, and the said beam then serves as a fulcrum, so that the continued movement of the lever will apply the other beam.

My device is very simple and provides a brake which is automatically applied to the wheels by the cars coming together when the engine is reversed.

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

1. The combination of the brake-beams C, the springs F, connecting the same, the lever pivoted on one of the beams C, the link connecting the lower end of the lever with the other beam C, and the sliding push-bar having its inner end pivoted to the upper end of

the lever and projecting forward beyond the end of the car, as set forth.

2. The combination of the brake-beams, the lever pivoted thereto, the push-bar pivoted to  
5 the lever, the bumper-head pivoted to the end of the push-bar, and the rock-shaft adapted to act on said bumper-head, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES F. DURKIN.

Witnesses:

J. P. OWENS,

F. P. BRADY.