

(No Model.)

H. J. McDEVITT & G. T. BARBER.

CAR SIGNAL.

No. 303,536.

Patented Aug. 12, 1884.

FIG. 1

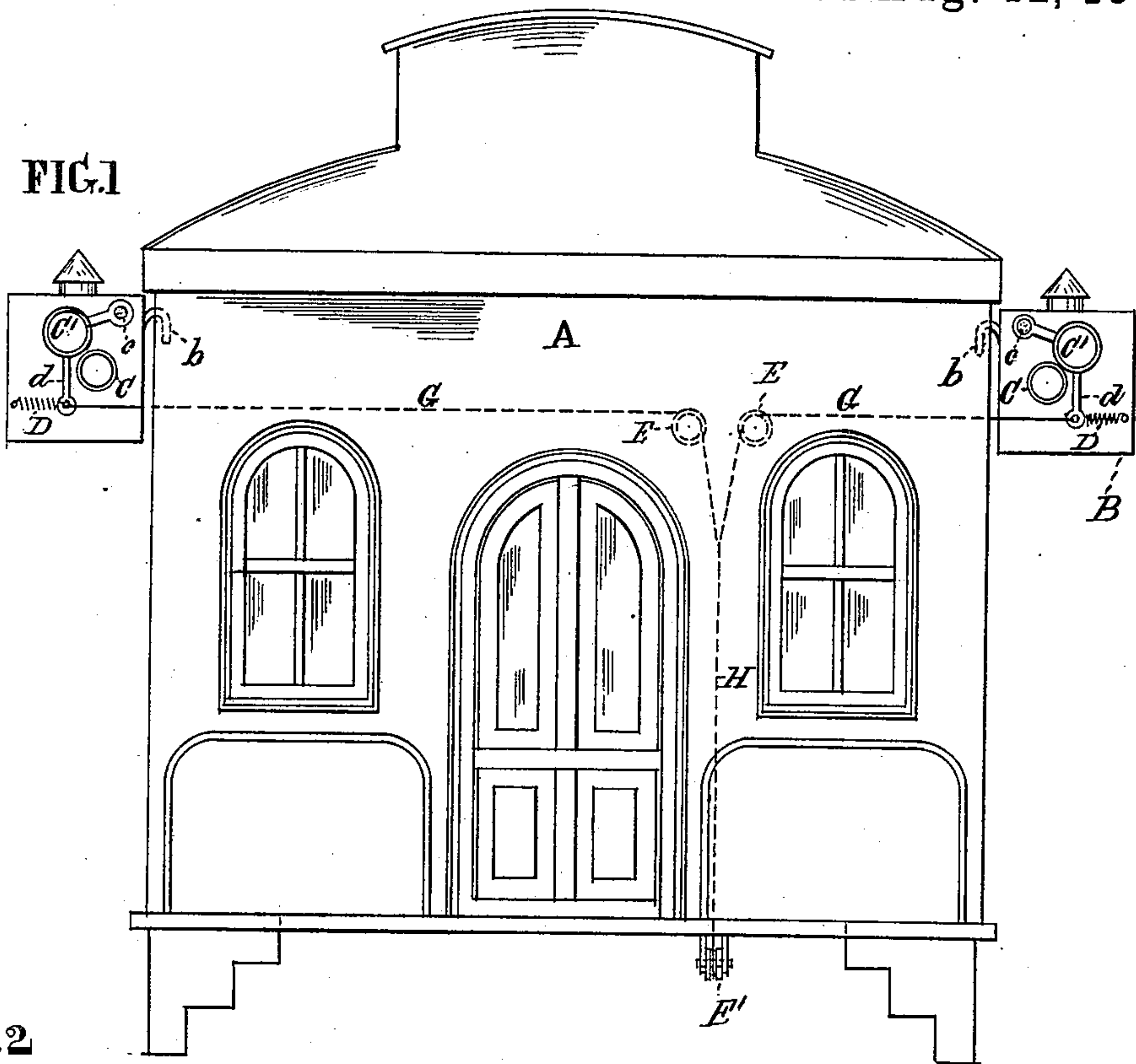
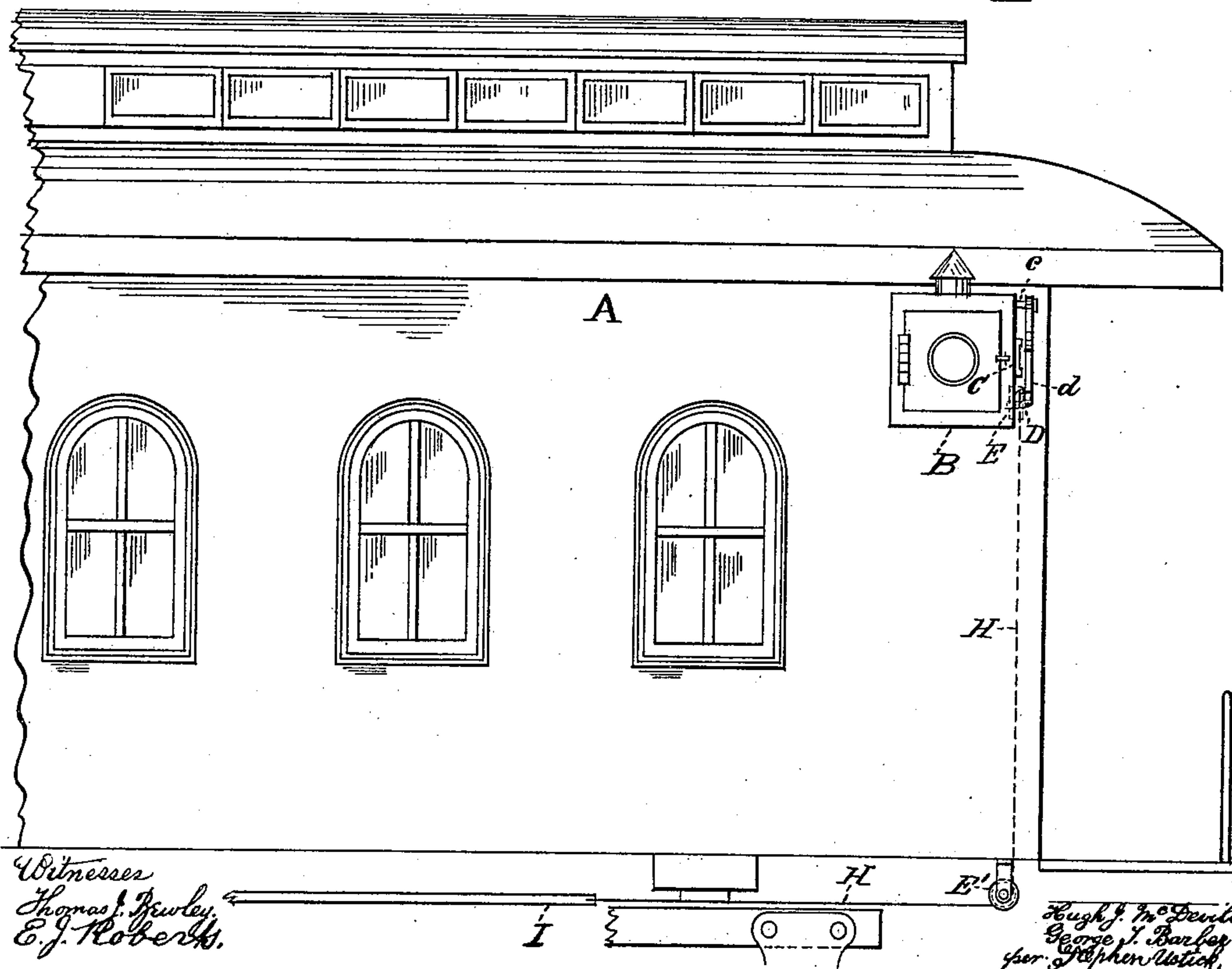


FIG. 2



Witnesses
Thomas J. Fawley
E. J. Roberts.

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UNITED STATES PATENT OFFICE.

HUGH J. McDEVITT AND GEORGE T. BARBER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS OF ONE-HALF TO RICHARD HAZARD AND JEROME B. GRAYBILL, OF SAME PLACE.

CAR-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 303,536, dated August 12, 1884.

Application filed December 28, 1883. (No model.)

To all whom it may concern:

Be it known that we, HUGH J. McDEVITT and GEORGE T. BARBER, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Car Signals, of which the following is a specification.

The object of our invention is a signal operated by and simultaneously with the brake of a train of cars in such a manner as to give timely warning that the train has stopped to the engineer of a rear train, so that he may check the speed of his train or arrest its movements in time to prevent a collision; and the nature of our invention consists in the arrangement of a lantern or illuminated case provided with appropriate signals at each side and at the rear end of the last car of the train, and having the danger-signals connected with the brake-rod by means of cords or chains, so that when the brake is applied to stop the train the said signals are drawn into position to indicate the fact, and when the brake is taken off a reverse movement is given to these signals by means of springs, and the white signals are thereby uncovered, as hereinafter fully described. If desired, bell-cranks may be used instead of pulleys G G G'.

In the accompanying drawings, which make a part of this specification, Figure 1 is an end elevation of the rear end of the car A. Fig. 2 is a side elevation of the same.

Like letters of reference in all the figures indicate the same parts.

A represents the rear end of a car, which is supposed to be the last car of a train. It has at each side and at the end wall a lantern or illuminated case, B, which is detachable, as not being required to be used in the daytime. For the purpose of facilitating the detachment and connection of the lanterns, they are provided with hooks *a*, which engage with the sides *b* of the car. At opposite sides of the lanterns, and in the longitudinal direction

of the car, there are the ordinary white signals, C, connected with the openings in the sides, so that a clear light will be seen at night, the lanterns being illuminated in the usual manner. There are red or danger signals, C', hung on pins *c*, which project from one side of the lanterns. Projecting from the lower edge of the signals are arms *d d*, to which one end of spiral springs D connect, the other end of the springs being fastened to the lanterns, as seen in Fig. 1, whereby the signals are drawn away from the light into their elevated position when not under the action of the brake. To arms *d d* are connected one end of the cords or chains G G, which pass over the pulleys E E on the end of the car, and are connected with the single cord or chain H, which connects with the pulley E' at the bottom of the car, and extends forward beneath the same and is connected with the brake-rod I, as shown in Fig. 2, the connection being made at any convenient part of the rod.

The operation is as follows: When the brake is applied, the cord or chain H being drawn downward, the cords or chains G G are thereby drawn in the direction of the arrows, and the signals C' C' drawn downward, so as to cover the white lights B B and receive illumination from the lanterns as soon as the train has been stopped by the action of the brake, thereby giving notice by the exhibition of the danger-signal that the train is in the way of a train in the rear, and thus by giving timely notice avert a collision. As soon as the brake is reversed to its inoperative position, the signal-chains being thereby slackened, the spiral springs D D return the signals C' C' to their upward position, whereby the white signals C C are exhibited.

We claim as our invention—

1. The combination of the swinging danger-signals C' C', having arms *d d*, with the white signals C C, the danger-signals being hung on pins *c c*, and connected with the tension-springs D D, whereby they are drawn out of line of

the white signals when the force which brings them into their normal position is withdrawn, substantially as described.

2. The combination of the danger-signals
5 C' C', having arms \bar{d} \bar{d} , with the brake-rod I, cords or chains G G and H', and pulleys E E and E', whereby the movement of the brake-rod in the stopping of the train draws the

signals down into their lower and illuminated position to give warning to a rear train, so substantially as described.

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