

UNITED STATES PATENT OFFICE.

WILLIAM H. WARD, OF AUBURN, NEW YORK.

IMPROVED RAILWAY-CAR APRON OR DUSTER AND BRIDGE.

Specification forming part of Letters Patent No. 71,558, dated November 26, 1867.

To all whom it may concern:

Be it known that I, WILLIAM HENRY WARD, of the city of Auburn, in the county of Cayuga and State of New York, have invented a new and Improved Railway Passenger-Car-Connecting Bridge and Duster; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 represents a plan, and Fig. 2 an elevation of Fig. 1.

The nature of my invention consists in providing a good and suitable self-adapting safety-bridge between the coupled ends of passenger-car platforms when coupled together and forming a train in motion upon the line of railway, to enable conductors, brakemen, passengers, and others to pass from car to car in safety; also, an apron, likewise self-adapting to the expansion and contraction of the strain and slack between the cars, making the roadway invisible to the travelers on the bridge, thereby imparting an additional degree of seeming safety to the timid, and preventing the dust from rising.

To enable others skilled in this branch of railway passenger-car construction to make and use my invention, I will proceed to describe its use, reference being had to the accompanying drawing, in which—

Fig. 1 represents a plan of two passenger-car platforms as ordinarily coupled together and supplied with my arrangement of bridge and duster, A A representing the platforms; B, the self-adapting bridge, upon which passengers and others may walk with safety, consisting of a suitable piece of board or thin plank, of sufficient thickness for strength, and as wide as circumstances will admit of between the platform hand-rail uprights, and on either end are secured suitable cross-rods to retain it in position by their catching to the hand-rail uprights, this bridge-piece to be of sufficient length to adapt itself to full-strain length or jam slackness. These said end cross-pieces *d d* may be placed on the under side of the bridge, or at its ends, or on top, agreeable to the constructor's and user's pleasure. One or more hand-holes, *e e*, are made at either edge, near the center, for convenience in handling,

but are not essential so far as the bridge itself is concerned; and instead of cross-pieces, holes may be bored in the edges of the bridge near the ends, and suitable pins inserted in lieu thereof.

The duster consists of two pieces of band or other iron, *a a*, being secured together by means of thumb or other screws, *c c*, or their equivalent. These said pieces are bent at the place where the brake-shaft passes down to the brake-connections below, as shown at *h h*. By using two sets of these gripe, and placing the edges of some strong flexible material of sufficient width to span the space between them respectively, and then tightening the screws sufficiently, will securely retain the material thus placed between them, constituting the duster C; and, by dropping these end gripe, *a a a a*, into their receiving-brackets *b b*, the apron or connecting-duster is complete.

To separate or uncouple cars at stations, the brakeman removes the bridge B from its place, and lays it on the platform A of the car that will require it, and then proceeds to raise the gripe end of the duster C from the car-platform to which it is not required, and deposits it between the platform hand-rail uprights *g g*, Fig. 2, and its holders *i i*, Fig. 1, and *d*, Fig. 2, on the car required, that upon making up another train or adding another car the duster and bridge are of easy access for immediate use.

Fig. 2 is an elevation of Fig. 1, in which A A represent the platform-floor timbers, and B B the platform end timbers; C, the bridge; D, the flexible apron or duster; *a a a a*, the gripe; *b b*, the brackets; *c c*, the thumb-screws; *d d*, the upright-holders, (marked *i i*, Fig. 1;) *e e*, the platform hand-rail uprights.

Bridges between cars, secured by means of revolving hinges or central bolts, have been used, allowing the one end of the bridge to be loose. To accomplish this the ends of the car-platform require special fittings to receive the fastenings of the bridge; but if only one end of the car be thus fitted, the bridge becomes useless whenever two unfitted platforms come together, or by coupling in a car from another line of railway unprovided with the requisite fittings, while this arrangement is applicable and self-adapting on all occasions, and will adapt itself when the platform of one car is considerably higher than its connected one, as

the bridge will naturally hang with its cross end rod resting against the hand-rail uprights of the high platform. Another and very serious objection to having the bridge fastened to either platform is its unadaptability to high and low platforms being coupled together, and of persons standing at its loose end when a sudden slackness or contraction between cars is produced, resulting in injury to those with whom it was thus suddenly brought in contact; when, if its other end had been free, injury would have been impossible.

I do not confine myself to the bridge and duster in combination, but separately or collectively, as may be required by the parties using them—that is, the using of either of

them, or both, without authority will be an infringement of the rights and interests herein conveyed and secured to me.

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

1. The adjustable apron or duster, when constructed and arranged as and for the purposes herein set forth.

2. The combination of said duster or apron with the bridge or crossing B, in the manner and for the purpose herein described.

W. H. WARD.

Witnesses:

E. S. BROOKE,
J. W. BARNACLE.