

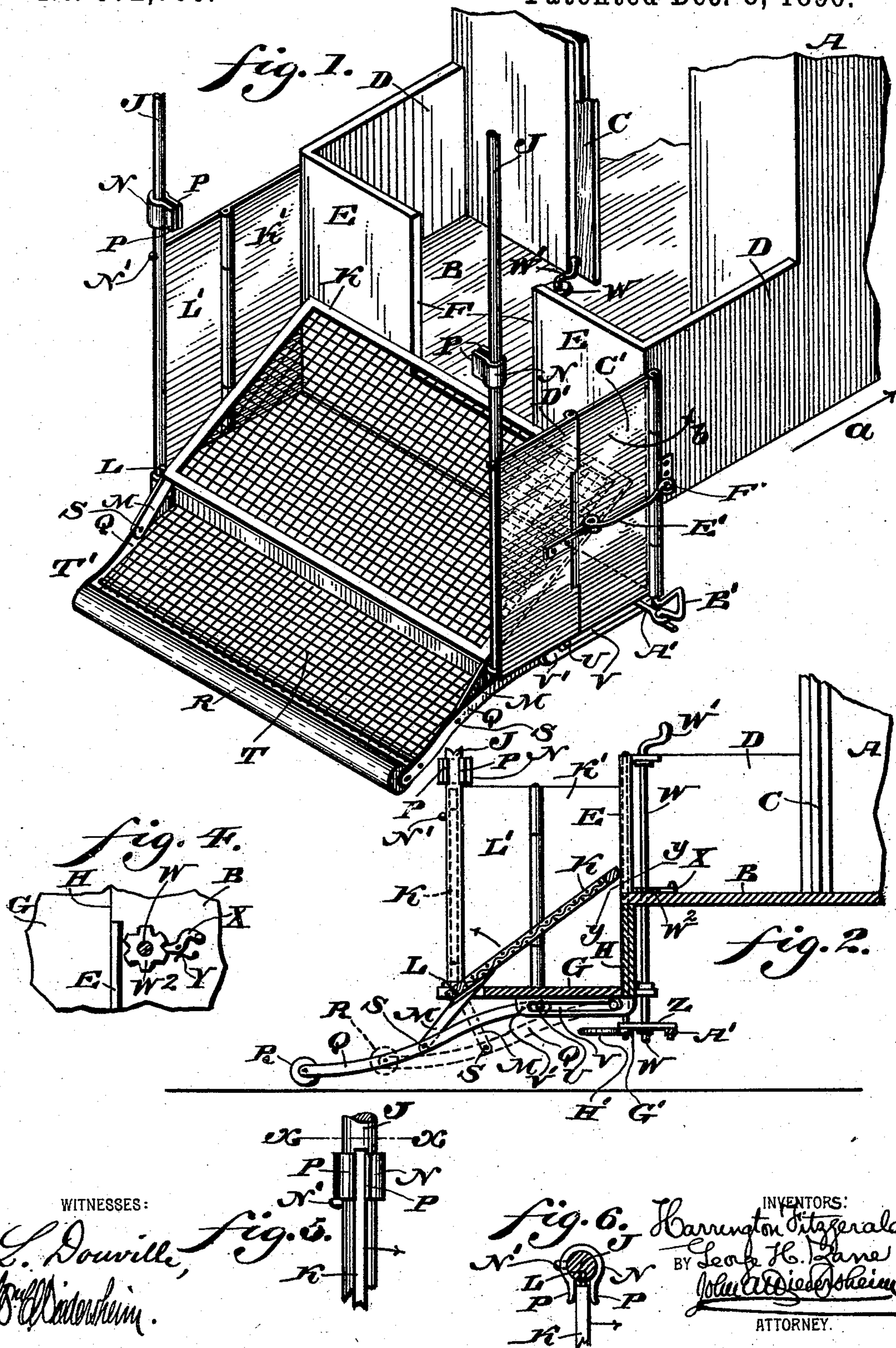
(No Model.)

2 Sheets—Sheet 1.

H. FITZGERALD & G. H. ZANE.
COMBINED CAR PLATFORM AND FENDER.

No. 572,700.

Patented Dec. 8, 1896.



WITNESSES:

L. Douville,
W. W. W. W.

Fig. 5.

Fig. 6.

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(No Model.)

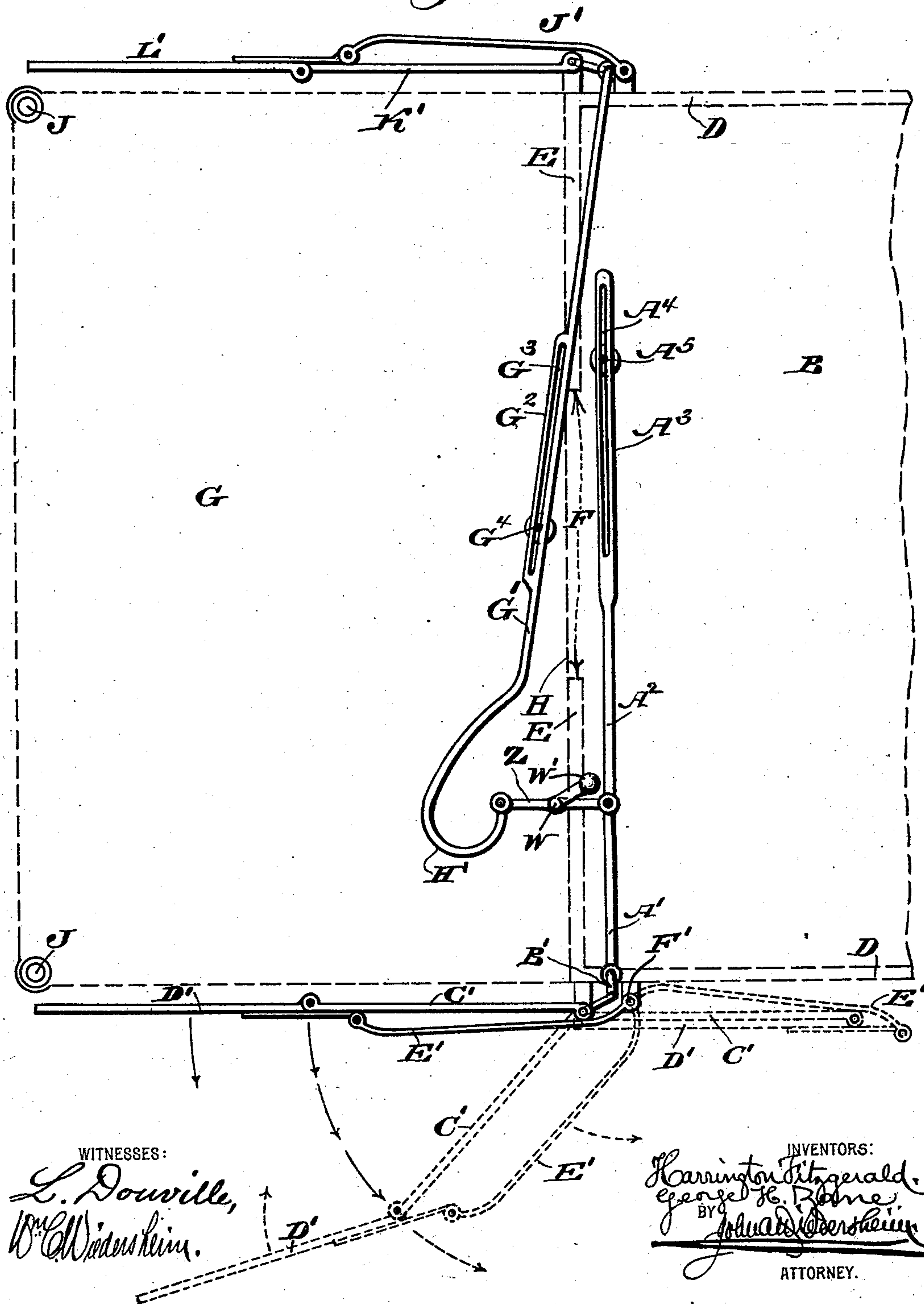
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fig. 3.



UNITED STATES PATENT OFFICE.

HARRINGTON FITZGERALD AND GEORGE H. ZANE, OF PHILADELPHIA,
PENNSYLVANIA.

COMBINED CAR PLATFORM AND FENDER.

SPECIFICATION forming part of Letters Patent No. 572,700, dated December 8, 1896.

Application filed June 4, 1896. Serial No. 594,202. (No model.)

To all whom it may concern:

Be it known that we, HARRINGTON FITZGERALD and GEORGE H. ZANE, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in a Combined Car Platform and Fender, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists of a novel construction of combined car platform and fender in which provision is made for obviating the objections urged against fenders now in use, a portion of the car-platform being utilized as a fender and the latter when not in use being capable of being retracted into a position under the car-platform.

It also consists of a novel construction of devices whereby we are enabled to dispense with the side steps heretofore employed, a passage being provided through the center of a partition which serves the function of the dashboard of a car, doors being located in advance of said partition, which can be opened and closed at the will of the attendant.

It further consists of novel details of construction, all as will be hereinafter set forth, and specifically pointed out in the claims.

Figure 1 represents a perspective view of a combined car platform and fender embodying our invention. Fig. 2 represents a longitudinal sectional view of Fig. 1, showing the relative position of the parts when in assembled position. Fig. 3 represents a plan view of the mechanism for operating the side doors, the car-body being shown in dotted lines. Fig. 4 represents a section on line *yy*, Fig. 2. Fig. 5 represents a detailed view, on an enlarged scale, of a detached portion, showing a split sleeve or clip for holding a portion of the fender-frame in upright position. Fig. 6 represents a section on line *xx*, Fig. 5.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a car-body, and B the platform thereof, said platform being provided with the upright sides D and the partitions E, between which and the door or front C the motorman or attendant stands.

F designates a substantially centrally-located passage through the partition E.

G designates a step which is joined to the platform B by the upright member H, said step projecting laterally in front of said member and having the rods or uprights J located at its forward corners.

K designates a frame which constitutes a portion of the fender, and is provided with the pins L in its lower portion, which have suitable bearings near the lower portion of the uprights J, as indicated in Figs. 2 and 6, whereby said frame K can be adjusted to an upright or inclined position according to requirements, said frame being of rectangular or other desired shape and having a wire screen or netting thereupon.

M designates arms which project forwardly from said frame K and are pivotally attached to the arms Q at the points S, said arms Q being joined at their forward extremities by the cross-piece, roller, or buffer R.

N designates a split sleeve or clip which is movably mounted on the uprights J and has its extremities or wings P adapted to engage the frame K when the same is in upright position, as indicated in dotted lines in Fig. 2 and in full lines in Figs. 5 and 6.

T designates suitable netting or other similar material which is attached to the arms Q, thus forming a frame T', so as to protect an object or thing struck from serious injury.

U designates pins which project from the arms Q near their rear extremities and engage the walls of the slots V in the plates V', which are secured to the step G, as indicated in Figs. 1 and 2.

W designates a rod which is mounted in suitable bearings adjacent the partition E and has a handle W', said rod having a ratchet-wheel W² mounted thereon, which is adapted to be engaged by the nose of the pawl X, which is held in proper position by means of the spring Y.

Z designates an arm which is secured to the lower extremity of the rod W, in the present instance underneath the step G, said arm having attached to one end thereof a link A', which is connected to a suitable portion of the rod B', which is attached to the door C', which is mounted in suitable bearings.

D' designates another door or plate which is pivotally attached or hinged to said door C', said door D' having a link E', which has one end attached thereto, and its other end pivotally secured to a fixed point F', as indicated in Figs. 1 and 3.

G' designates a connection leading from the end of the bar Z opposite its point of connection with the link A', said connection G' having an offset curved portion H', in order to enable the bar Z to clear when the handle W' is operated.

J' designates the mechanism for operating the doors K' and L', said mechanism being substantially the same as that already described with reference to the doors C' and D', and therefore requiring no further description.

The operation is as follows: If we assume the end of the car seen in Fig. 1 to be progressing toward the left, the parts will be placed in the position seen therein, the frame K being inclined as indicated, whereby the arms Q and the frame T' are caused to project forwardly, and the fender is in operative position, and in case an object is struck thereby it will be caught up and prevented from serious injury.

The construction at each end of the car is substantially identical, and if we now assume the car to be going in the direction indicated by the arrow a, or to the right, the end seen in Fig. 1 will be the rear end, whereupon the attendant simply turns the frame K so that it assumes an upright position, as seen dotted in Fig. 2, said frame being held there by the clips or sleeves N, which engage therewith, as indicated in Figs. 5 and 6, the arms Q and M, the frame T', and the buffer R being now withdrawn or retracted under the step G into the position seen in dotted lines in Fig. 2. When said frame K is in upright position, the ingress and egress of passengers is permitted through only the rear of the car, the attendant opening the doors D' C' and K' L' at the proper intervals by simply turning the handle W', it being thus apparent that all passengers must first step upon the step G and thence pass through the passage F onto the platform B and thence into the interior of the car, the liability of accidents being greatly diminished, since no person can enter or leave the car except when the doors C' D' or K' L' are opened, and these doors, being under the control of the attendant, can only be opened when the car is stationary, it being also noted that the frame K, when in upright position, serves as the rear dashboard.

The operation of the doors will, it is thought, be apparent from Fig. 3, the rotation of the rod W causing the link A' to move in the direction indicated, thus opening the door C' in the direction of the arrow b in Fig. 1, a further rotation of the rod W causing the door D' to fold upon the door C', as indicated in dotted lines, by reason of the manner of connecting the rod E' thereto, and the position

of the doors when in partial and fully open position being evident from the bottom of Fig. 3, as seen in dotted lines.

In the preferred embodiment of our invention we provide the rod G' with an enlarged portion G², which has the slot G³ therein, whose walls are engaged by the pin G⁴, whereby said rod G' is guided in its movement and the liability of a dead-center is avoided. In like manner the link A' is provided with an extension A², which has a thickened portion A³, in which is the slot A⁴, the walls of which are engaged by the pin A⁵, around which the rod A² moves.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a combined car platform and fender, a platform having a partition with a passage therein, a step in advance of said platform, a sectional fender pivotally mounted in advance of said partition on said step, and having a section covering the same.

2. In a device of the character described, a car-platform having a partition thereon, a passage through said partition, a step in advance of the latter, and doors on the side of said step, substantially as described.

3. In a device of the character described, a car-platform having a partition thereon with a passage therethrough, a step, doors in advance of said partition at a side of said step, means for actuating said doors, and a fender pivotally mounted in advance of said partition, substantially as described.

4. In a device of the character described, a car-platform, a step in advance thereof, doors on each side of said step, uprights at the forward corners of the latter, and frames pivoted to said uprights and adapted to form a fender, substantially as described.

5. In a device of the character described, a car-platform, a step in advance thereof, a fender pivotally mounted on said step, and having a frame and forwardly-projecting arms, said frame being adapted to be placed in upright or inclined position, slotted plates under said step, and pins in said arms adapted to engage the slots in said plates, substantially as described.

6. In a combined car platform and fender, a car-platform, a step in advance thereof, uprights located at the forward corners of said step, a frame pivotally mounted near the lower portion of said uprights, and split sleeves or clips adapted to sustain said frame in an upright position when desired, substantially as described.

7. In a combined car platform and fender, a car-platform, a step in advance thereof but on a lower level, doors hinged at the side to said step, and means for operating said doors in unison, substantially as described.

8. In a combined car platform and fender, a car-platform, a step in advance thereof but on a lower level, and a fender pivotally mounted with respect to said step, in combination

with doors located at the side of said step, and means for operating said doors, substantially as described.

9. In a combined car platform and fender, a 5 step, a door at the side of the fender with mechanism for operating the same, a second door hinged to said first-mentioned door, and a rod pivoted at one end to an arm secured to said second door, and at its other end to a 10 fixed point, said parts being combined substantially as described.

10. A door-operating mechanism, a car, a plurality of doors on each side thereof, said 5 doors being hinged to each other a connection from one of said doors on each side to a fixed point a bar movably mounted, a slotted rod extending from said bar to one of said doors, a pin engaging the slot in said rod, a

link extending from said bar to one of said doors, a slotted extension on said link and a 20 pin engaging the same, substantially as described.

11. In a combined car platform and fender, a door at the side of the fender, an upright rotating rod having suitable bearings, an arm 25 rigidly secured to the lower end of said rod, an arm connected with said door, a link connecting said arms having a slotted portion, and a fixed pin entering the slot therein, said parts being combined substantially as de- 30 scribed.

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