J. M. HOPKINS.

CAR DOOR.

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1,053,510.

Patented Feb. 18, 1913.

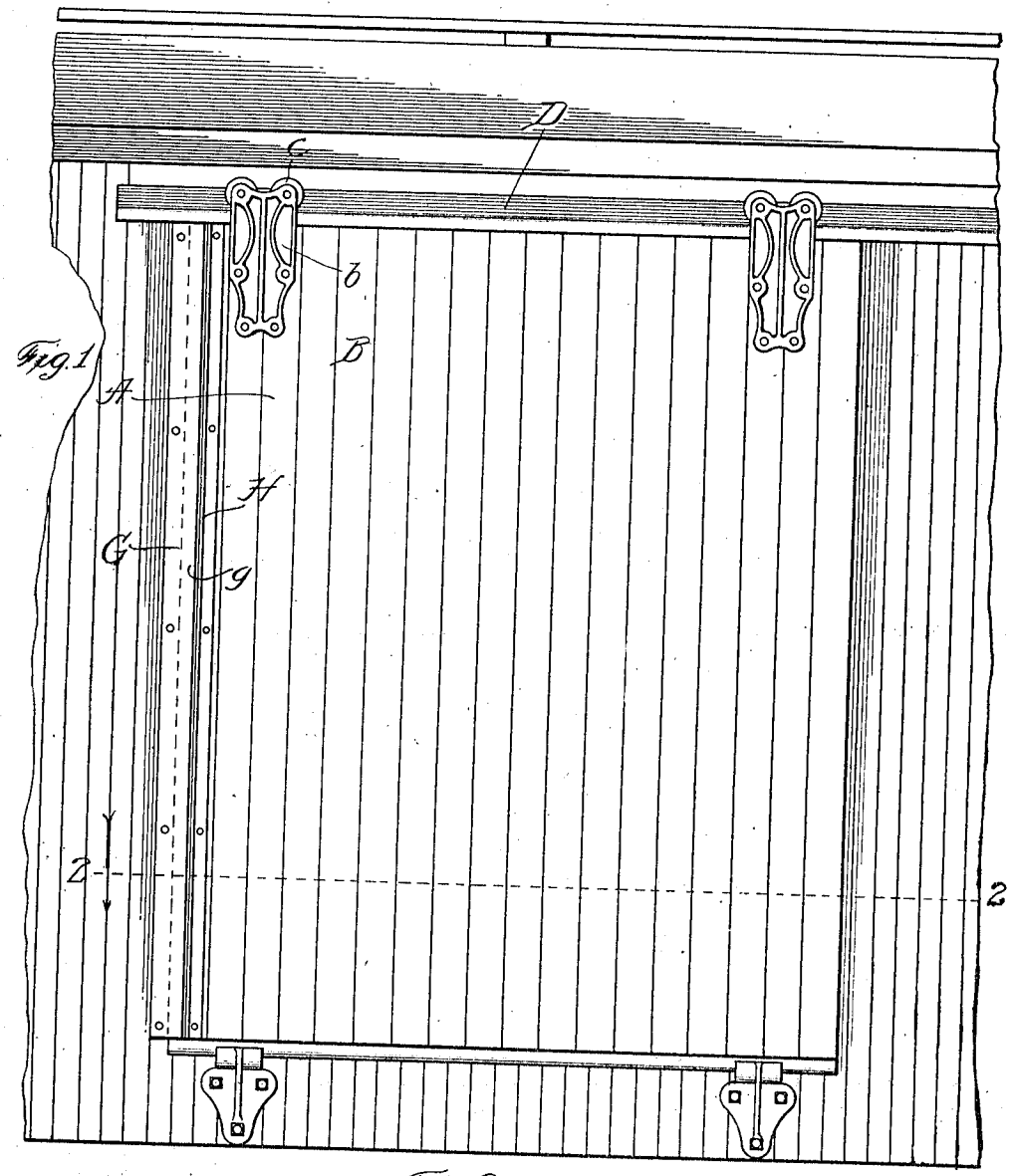

Fig. 1.

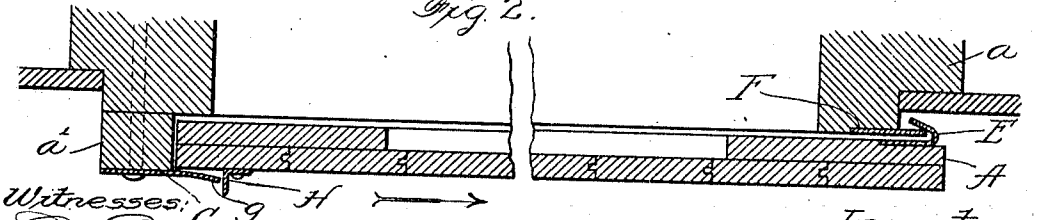

Fig. 2.

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UNITED STATES PATENT OFFICE.

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CAR-DOOR.

1,053,510. Specification of Letters Patent. Patented Feb. 18, 1913.

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To all whom it may concern:

Be it known that I, JAMES M. HOPKINS, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Doors, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 is a view in side elevation of a part of the side of a railway freight car having my invention applied thereto. Fig. 2 is a view in horizontal section on line 2—2 of Fig. 1, this view being shown upon an enlarged scale.

The present invention has relation more particularly to the improvement of that class of car doors designed for railway freight cars in which provision is made for preventing the access of rain, snow, cinders or the like at the front and rear edges of the door when in closed position. In this class of doors it has been heretofore proposed to provide the rear edge of the door with an inverted or U-shaped strip adapted, when the door was moved to closed position, to receive a plate projecting rearwardly from the corresponding post of the doorway; and it has also been proposed to provide the front post or side of the doorway with a rearwardly projecting plate or strip adapted, when the door was in closed position, to extend over the front edge of the door. In order to permit the door to slide and close easily, the front strip or guard plate, behind which the front edge of the door closes, must necessarily be set at a distance from the door opening somewhat in excess of the thickness of the door and, ordinarily, the free edge of this strip or guard plate is flared so as to prevent its contact with the edge of the door as the latter is moved to closed position.

In practice, it has been found that when the door is moved to closed position, and particularly when the car is traveling in the direction of the arrow shown in Fig. 2 of the drawing, rain, snow, cinders or the like blown against the surface of the door will pass between the guard strip and the door and around the front edge of the door into the body of the car.

The present invention has for its object to provide against the passage of rain, snow, cinders and the like around the front edge of the door and to this end the invention consists in providing the outer face of the door with an offset part or plate which, when the door is in closed position, will be adjacent and project outwardly across the rear free edge of the plate or guard strip that extends from the front post or side of the doorway.

Referring to the accompanying drawing, A designates the side wall of the car and B denotes the door which, as shown, is carried by hangers *b* provided with rollers C that travel upon a rail D that is fixed to the side wall of the car and extends across the top of the doorway and to a distance at one side thereof. Preferably, the rear edge of the door A is provided upon its inner surface with a channel plate E which, when the door is in the closed position shown in Fig. 2 of the drawing, will receive the free edge of a plate F that projects rearwardly from the rear post or frame *a* of the door. To the front post or door stop *a'* is fixed a guard plate or strip G, the free edge of which is flared outwardly, as shown at *g*, and is adapted to cover the front edge of the door A when the latter is in closed position, as shown in the drawing.

The outer face of the door is provided with an offset part or plate H that is arranged at such distance from the front edge of the door that when the door is in closed position said offset part will come adjacent and project outwardly across the free edge of the strip or guard plate G. Hence, when the car is moving in the direction of the arrow, Fig. 2, the offset H will serve to prevent the access of rain, snow, cinders or the like inside the plate G and around the front edge of the door A. Preferably, the offset H consists of an angle bar extending from top to bottom of the door, one side of this angle bar being suitably attached to the face of the car, while the other side projects outwardly at an angle (preferably at a right angle or an acute angle) to the face of the door. By means of this offset or strip H, the precise construction and shape of which may be varied, all danger of access of rain, snow, cinders or the like around the front edge of the door is avoided.

By flaring the free edge portion *g* of the weather strip G outwardly, binding between the forward edge of the door and the weather strip is prevented and, at the same time, the construction is such that the for-

ward edge of the door is forced inwardly when the door is closed and is snugly held in closed position. Such a construction of weather strip acts to prevent the entrance of moisture and cinders beating against the side of the car or when the car is traveling in forward direction and at the same time acts to hold the front edge of the door snugly in closed position without binding. But, inasmuch as the free edge of the weather strip is flared outwardly, moisture and cinders are apt to enter around the front edge of the door when the car is traveling rearwardly or in the direction indicated by the arrow in Fig. 2. By providing the door with the guard strip H which projects outwardly across the free outturned edge *g* of the weather strip, the space between the outturned edge and the face of the door is closed, so that moisture and cinders cannot enter when the car is traveling in rearward direction. At the same time, as stated, the construction is such that there can be no possible binding between the guard strip H on the door and the weather strip G upon the door stop.

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

1. A railway car provided with a door opening and a door stop at the forward edge of said opening, and a sliding door for closing said opening, said door stop being provided with a weather strip having a rearwardly projecting, outturned, free edge portion arranged to overlap the forward edge of the door when the latter is closed and to guide the front edge of the door over against the car in closing, and said door being provided on its outer face and adjacent its front edge with a guard projecting outwardly across the rear, free, outturned edge of said weather strip and closing the opening between the rear edge of said weather strip and the face of the door, substantially as described.

2. A railway car provided with a door opening and having a door stop at its forward edge, a sliding door for closing said opening, a weather strip secured to said door stop and having a rearwardly extending outturned portion arranged to overlap the forward edge of the door when the latter is closed and to guide the front edge of the door over against the car in closing, and a vertical angle bar secured to the outer face of the door and arranged adjacent but spaced rearwardly from its front edge, one flange of said angle bar abutting against the face of the door and being attached thereto, and the other flange of said angle bar projecting outwardly substantially at right angles to the face of the door, said projecting flange, when the door is closed, being arranged adjacent and extending across the rear, free edge of said weather strip, substantially as described.

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