

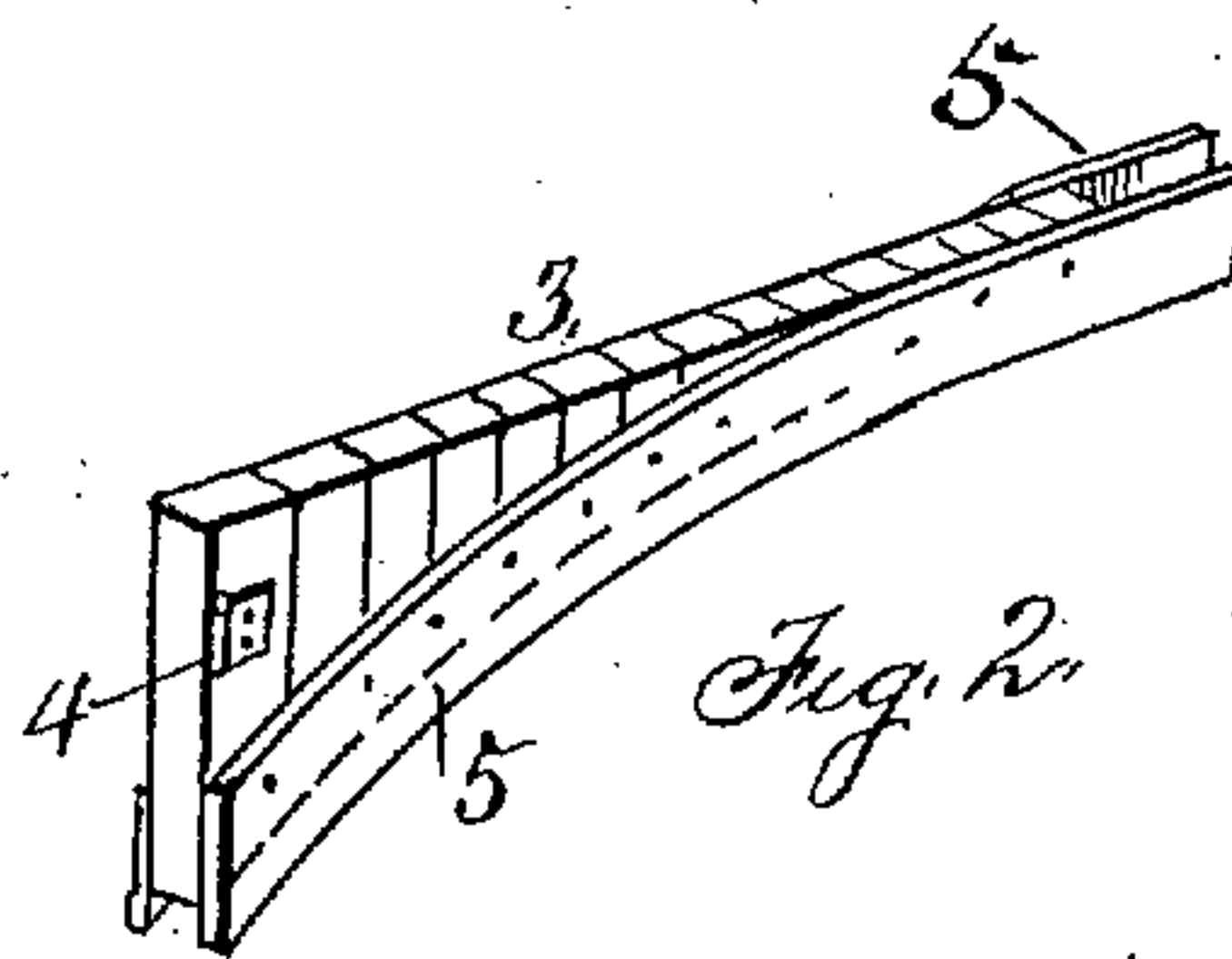
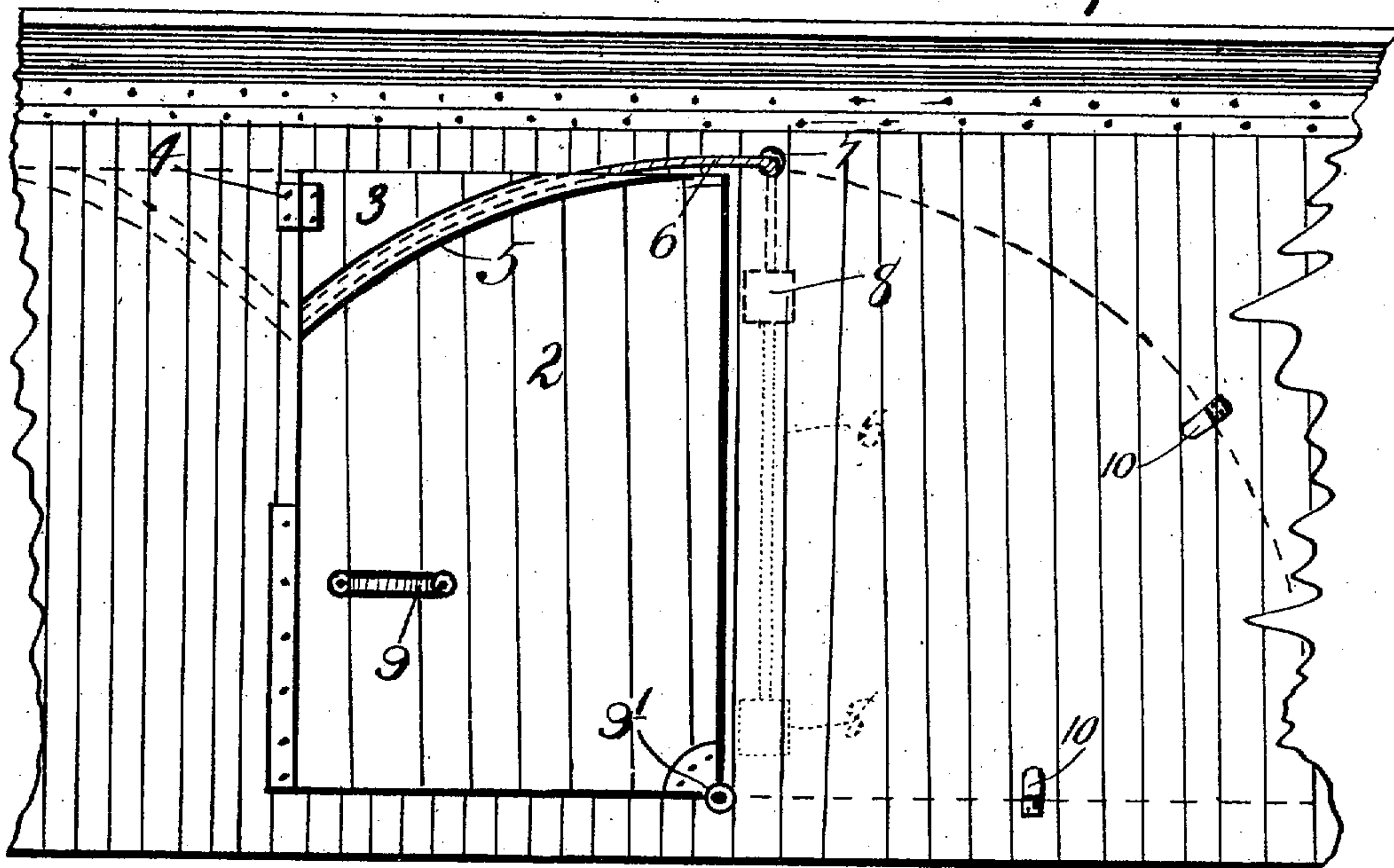
No. 859,049.

PATENTED JULY 2, 1907.

J. B. COSTON.  
CAR DOOR.

APPLICATION FILED JULY 13, 1906.

*Fig. 1.*



Witnesses  
*J. P. Duffie*  
*B. C. Trott.*

Inventor  
*James B. Coston*  
By *James P. Duffie*  
Attorney

# UNITED STATES PATENT OFFICE.

JAMES B. COSTON, OF FORDYCE, ARKANSAS.

## CAR-DOOR.

No. 859,049.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed July 13, 1906. Serial No. 326,031.

*To all whom it may concern:*

Be it known that I, JAMES B. COSTON, a citizen of the United States, residing at Fordyce, in the county of Dallas and State of Arkansas, have invented certain  
5 new and useful Improvements in Car-Doors, of which the following is a specification.

My invention has relation to new and useful improvements in doors for railway cars and similar vehicles, and has for its object to eliminate the difficulties  
10 now experienced with sliding doors and to dispense with the costly overhead trolley supports and guides now employed.

More particularly, it is my purpose to provide a railway car with a door having a pinion or other equivalent means near one of its lower corners by means of  
15 which it may be tilted outwardly so as to expose the door opening. To assist in opening and closing the door I provide a weight which is adapted to slide up and down in a casing or chute in the car, and is connected  
20 by a rope or cable to said door, so that the same may be lowered and closed with but little exertion. I also provide guides which are engaged by the upper end and outer edge of the door when opened, and preferably construct the door with its upper inner edge cut away  
25 and employ in lieu thereof an independent corner door which is hinged to the side of the car.

With these ends in view my invention consists in the novel construction, combination, and arrangement of parts as set forth in the specification and claims here-  
30-unto attached.

In the accompanying drawings in which like parts are designated by like characters throughout the several views:—Figure 1, is a front elevation of a section of a car door provided with my improved door. Fig. 2, is  
35 a detail edge view of the hinged corner door.

My invention is described as follows:—The numeral 1, represents an ordinary construction of railway car, and 2, my improved tilting door. Said door 2 is preferably constructed with its upper inner corner cut away,  
40 and in lieu thereof there is employed an independent corner door 3, which is hinged to one of the sides of said car by means of a hinge 4, of any desired construction. Secured to the lower edge of said corner door 3, one on each side thereof, are strips 5, which are secured in  
45 such position that their lower edges extend a little below the lower edge of said corner door; the upper inner corner of the tilting door 2, and the lower inner corner of said corner door, are cut on the same circle, so as to fit each other when said doors come together. Secured  
50 to said door 2 near its upper inner part in any desired

manner is one end of a rope or cable 6, which runs upwardly and outwardly and passes inwardly through an opening or perforation 7, preferably located above and adjacent the upper outer corner of said door in the adjacent side of the car. Said rope is provided at its free  
55 end with a weight 8, which slides down and up in a casing or chute secured to the inner face of one of the sides of the car when opening or closing the door. Secured near or at the lower outer corner of said door is a pinion 9<sup>1</sup>. When I wish to open the door I take hold  
60 of a handle 9, secured preferably to the door near its side edge adjacent said hinge 4, and turn the door to the right on said pinion 9<sup>1</sup>. During this operation said weight 8 slides down in its casing or chute and greatly facilitates in opening the door. It also facilitates in  
65 closing said door. The dotted lines approximately show the position of the weight when the door is half open and entirely open. When open, the upper end and outer edge of said door engage in guides 10, secured to one of the sides of the car. The dotted lines adjacent  
70 said corner door 3 show the position of same when open, which corner would not have to be opened often. When said door is closed; its upper inner edge passes in between said straps or flanges 5, and comes in contact with the lower edge of said corner door 3. As  
75 the upper inner edge of said door and the lower edge of said corner are cut on the same circle, they necessarily conform with each other with respect to their curvatures.

The construction of the corner door 3, straps 5, and the corner of the tilting door 2, form a double lock; that is, the straps hold the tilting door from springing in or out, while said tilting door, fitting between said straps, keeps the said corner door from opening in or  
80 out.

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

1. In combination with a railway car, having a door opening in its side, a tilting door 2, having one of its upper corners cut away on a circle, thus leaving a corner  
90 opening when closed, hinged in said opening at one of its lower corners, and adapted to be tilted backwards out of said door opening; a corner door 3, hinged in said opening, having its lower edge cut on the same circle with said tilting door and fitting in said opening, and straps 5, one secured on each side of said corner door in such position that their lower edges extend a little below the lower edge of  
95 said corner door, said straps adapted to impinge against each side of the circle part of said tilting door, substantially as shown and described and for the purposes set forth.

2. In combination with a railway car; having a door opening in its side, a tilting door 2, having one of its up-

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per corners cut away on the arc of a circle, thus leaving a corner opening when closed, said door hinged in said opening at one of its lower corners, and adapted to be tilted backwards out of said door opening; a corner door 3, 5 hinged in said corner opening, having its lower edge cut on the same circle with said tilting door and filling said corner opening, and straps 5, one secured on each side of said corner door in such position that their lower edges extend a little below the lower edge of said corner door, said tilt-

ing door provided at its upper end with a cord and weights, 10 substantially as shown and described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES B. COSTON.

Witnesses:

FEASTER P. COLEMAN,  
JESSE P. BENTON.