

C. W. KENNON.  
 CINDER GUARD FOR RAILWAY CAR WINDOWS.  
 APPLICATION FILED AUG. 6, 1908.

922,290.

Patented May 18, 1909.

Fig. 1.

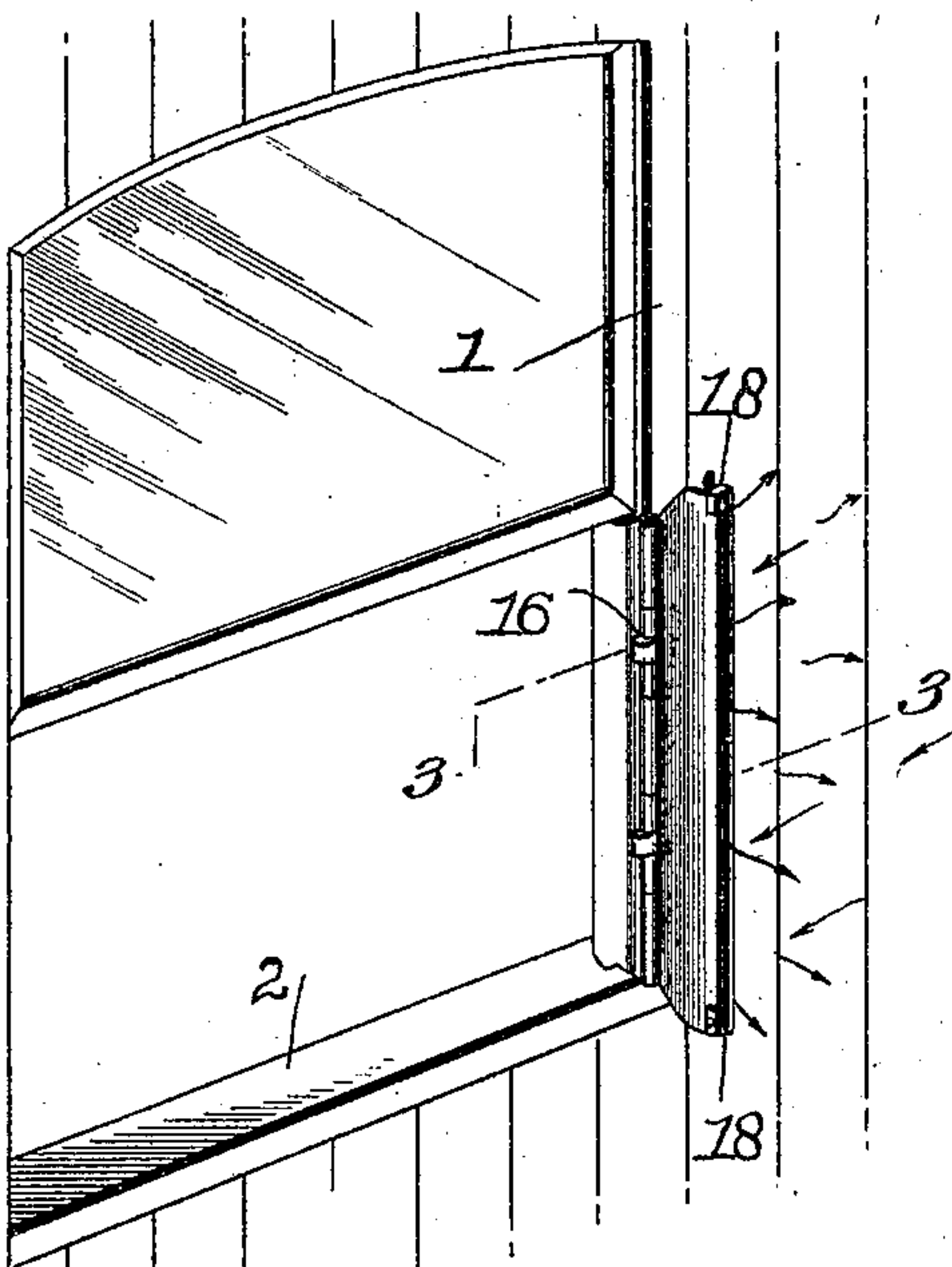


Fig. 2.

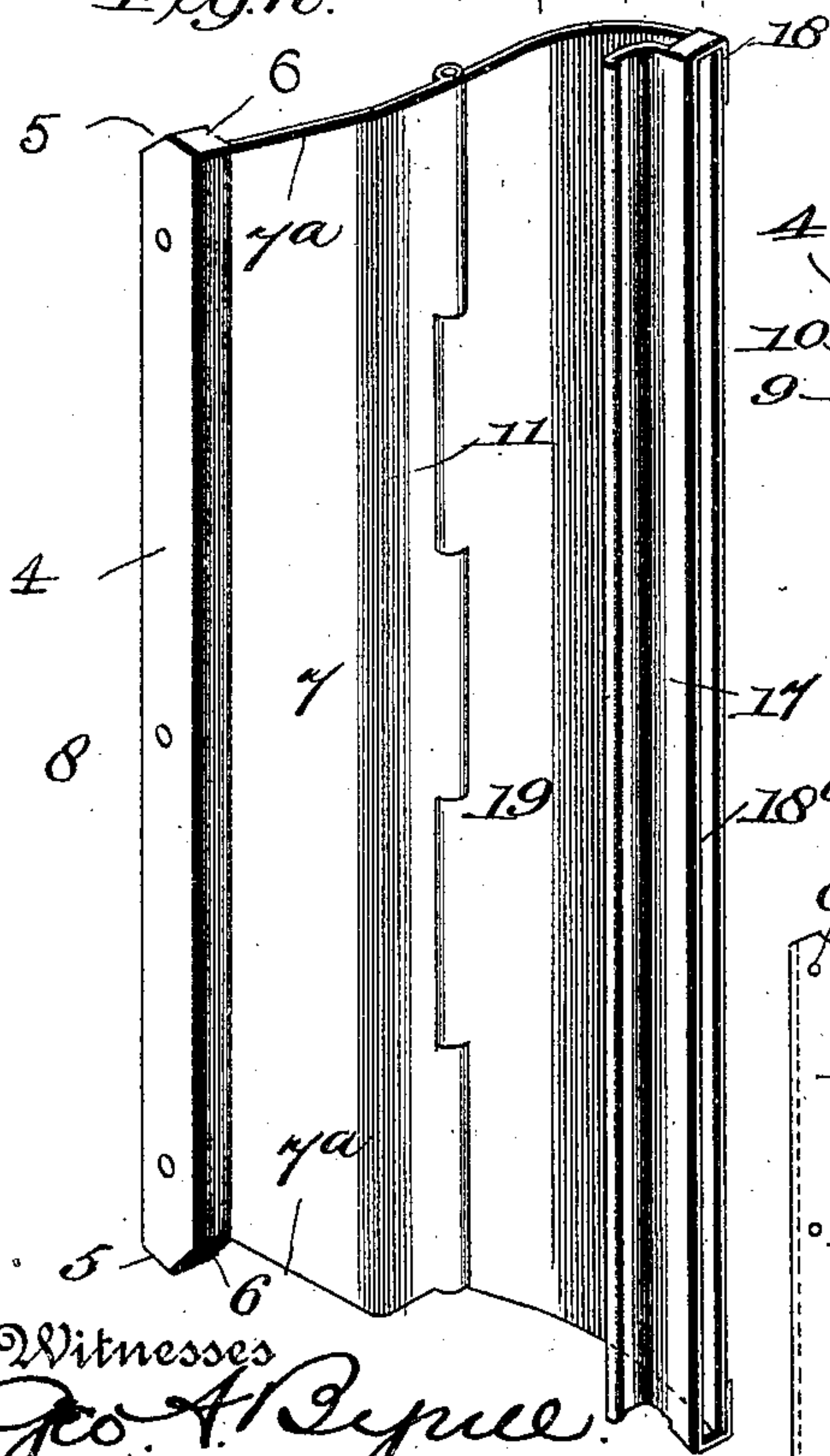


Fig. 3.

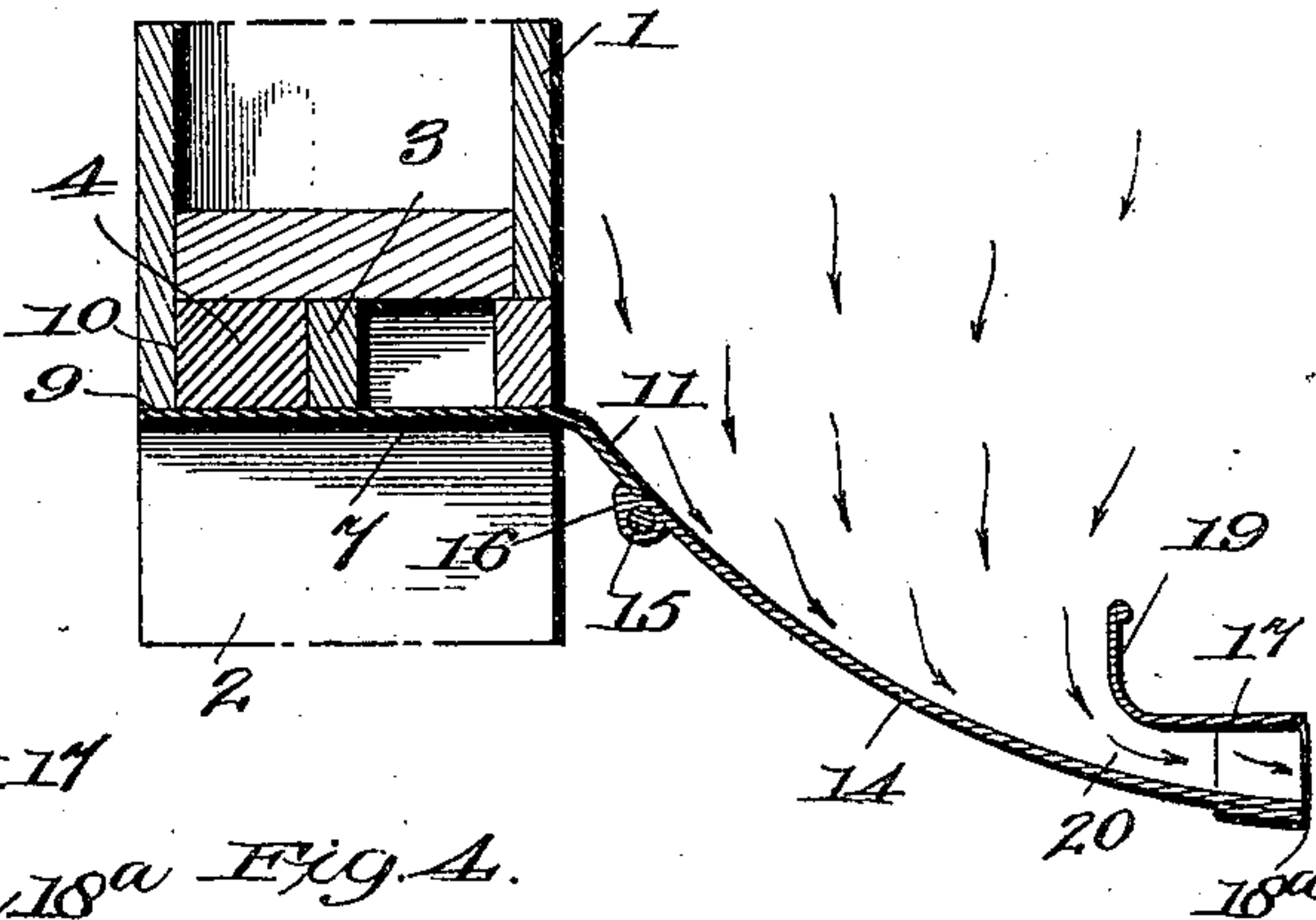


Fig. 4.

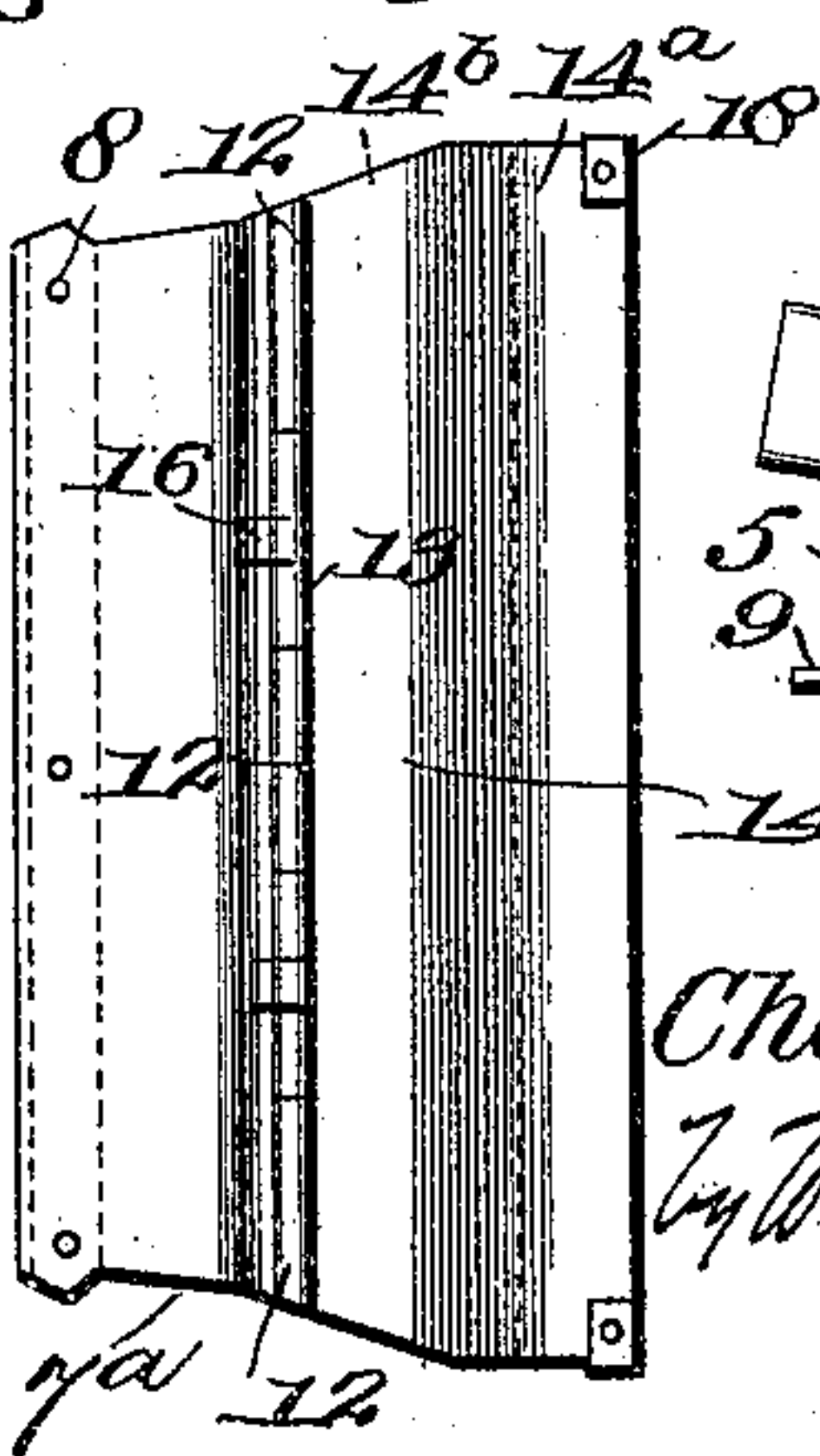
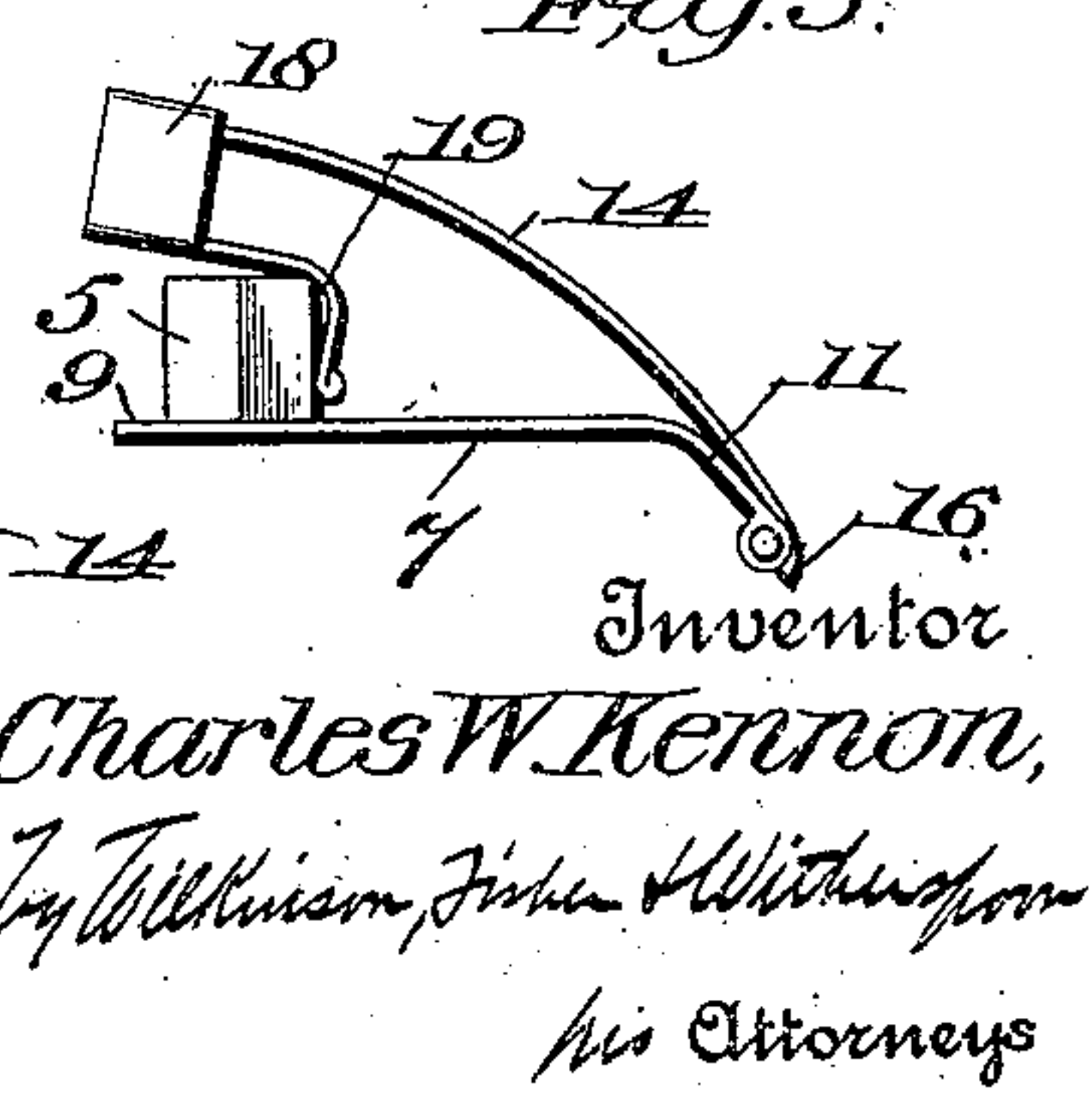


Fig. 5.



Witnesses  
*Geo. A. Ryer*  
*J. H. Hester*

Inventor  
*Charles W. Kennon*  
*By Wilkinson, Fisher & Witherspoon*  
 his Attorneys



# UNITED STATES PATENT OFFICE.

CHARLES W. KENNON, OF PASSAIC, NEW JERSEY.

## CINDER-GUARD FOR RAILWAY-CAR WINDOWS.

No. 922,290.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed August 6, 1908. Serial No. 447,315.

*To all whom it may concern:*

Be it known that I, CHARLES W. KENNON, a citizen of the United States, residing at Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Cinder-Guards for Railway-Car Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in window guards, and is especially designed for use as a cinder, soot and smoke arrester, for use on the windows of railroad trains.

One of the objects of the invention is to provide a portable device of this character, which will not only fit one side of a window, but will fit both sides on either side of the train, so that the guard may be used on either side of the train, and with the train running in any direction.

Another object of the invention is to so construct the device that it may be readily folded up, and at the same time be of a very rigid construction when in use.

Other features and advantages will appear from the following description, the particular points of novelty being pointed out in the appended claims, and while the invention is not restricted to the exact details as shown and described, still for the purpose of disclosure reference is had to the accompanying drawings illustrating a practical embodiment of the invention, in which like characters designate the same parts in the several views, and in which—

Figure 1 is a perspective view of the side of a railway coach with my invention applied to an open window, the train being shown as running in a direction opposite to the straight arrows. Fig. 2 is a perspective view looking toward the inside of the window guard when the same is in its full open position. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a rear view of the open guard, on a smaller scale than Fig. 2, and Fig. 5 is an end view showing the guard folded.

1 designates the side stile of a car window, 2 the sill thereof, and 3 the molding forming the guideways for the window sash.

4 is an upright standard adapted to be fitted beneath the lower edge of the sash and

the window sill, and in order to adapt this standard to the beveled faces of the sash and the sill, which, of course, incline in opposite directions on opposite sides of the car, the upper and lower ends of the standard are provided with double inclines 5 and 6.

7 designates a plate rigidly affixed to the standard 4 by any suitable means, such as rivets or screws 8, and this plate 7 may project slightly beyond the outer edge of the standard 4, as shown at 9, (Fig. 3), and the plate may be of a width substantially equal to the uniform width of a car window stile, so as to form a neat fit against the inside face thereof, as clearly shown in Fig. 3, the standard 4 resting snugly within the recess or guideway 10 for the window sash. The upper and lower edges 7<sup>a</sup> of the plate 7 are beveled to adapt themselves to the lower incline of the window sill. The outer edge of the plate 7 is bent outwardly, as at 11, and is provided with the hinge members 12, adapted to register with interposed hinge members 13, formed on the inner edge of the deflector member 14, which is preferably of a curved construction, and which is provided at its outer longitudinal edge with a discharge opening disposed in alinement with the deflecting face of said member. The upper and lower edges of the deflector member 14 are horizontal for a distance, as at 14<sup>a</sup>, and then incline inwardly, as at 14<sup>b</sup>, toward the inner edge of the deflector, the inner edge of the deflector being shorter than the outer edge, whereby the upper and lower ends of the deflector extend beyond the upper and lower ends of the rigid plate 7.

15 designates a hinge pin, and in order that a strong and tight joint may be made between the hinge members, a stop 16 is carried by each of the hinge members 13, which will limit the opening of the deflector 14 to the proper angle, the hinge being of such construction as to prevent no opening between the hinge members, and thus preclude any dust, or as an alternative, a pair of smaller hinges may be used, and a strip of wood or metal interposed between said hinges and secured at one edge to either the rear face of the angular portion 11 of the plate 7, or to the rear face of the curved deflector 14, the strip of metal being of sufficient width to project beyond the edge of whichever member it is attached to, and thus when the



guard is open from a half stop, equivalent to the stop 16, but also screening the opening between the plate 7 and the deflector 14.

Referring now to the discharge opening previously mentioned, this may be formed in any suitable way, but broadly consists in a secondary or auxiliary deflecting member, of narrower width and spaced from the deflecting face of the deflector 14. In the construction illustrated, this auxiliary deflecting member consists of a flat piece of metal 17, provided at each end with narrow U-shaped extensions 18, which pass over the upper and lower edges, and are riveted or otherwise secured to the outer face of the deflector 14. By this construction, a discharge opening 18<sup>a</sup> is formed, which is of substantially rectangular shape. The entrance to this discharge opening is preferably flaring, which flaring entrance is formed by the bent edge of the auxiliary strip comprising the lip 19, which, if of curved construction, is curved in an arc lesser than the arc of curvature of the deflector 14, and with its convex side disposed adjacent the concave side of the deflector 14 forms therewith a more or less restricted neck 20 between the flaring entrance and the discharge opening. It is preferable that this lip 19 be curved, as described, to form a trough-shaped portion. It might be stated that the position of this lip 19 with reference to the standard 4 is such that when the members are folded up for storage the trough-shaped portion of the lip 19 will fit over the standard 4, as shown in Fig. 4, and make a fairly compact fold. In use, any suitable catch, not shown, may be supplied for locking the device in the window, but this is not a part of my present invention.

In operation, it will be readily observed that by the use of the double inclines 5 and 6 at each end of the standard, the guard is adapted to be used on either side of the car, and with the car going in either direction, one of the lower inclines being adapted to fit the high side of the sill, and one of the upper inclines being adapted to fit the beveled bottom of the window sash, and one of the beveled edges 7<sup>a</sup> being adapted to fit the lower incline of the sill.

With the car running in the direction as indicated in Fig. 1, and with the guard wide open, it will be seen that any particles of cinders, soot, etc., will strike the inner or deflecting faces of the member 11 and deflector 14, and will be conducted through the opening at the outer edge of the deflector and thrown away from the device and from the car with great force, it being apparent that by the construction shown a forced draft of considerable power is created which will carry off the cinders, etc. with a very high velocity. At the same time it will be ob-

served that by extending the deflector plate above and below the rigid member 7, the deflector will extend above and below the open window, and there will, therefore, be no necessity of providing a hood or other cap piece.

Having thus described the invention, what I claim is:

1. A window guard, operating as described, comprising an elongated deflector member, provided on its deflecting face with a narrower member spaced therefrom and extending longitudinally of its outer edge and forming therewith an opening discharging directly in the initial lines of deflection, substantially as described.

2. A window guard, operating as described, comprising an outwardly and rearwardly-extending elongated curved deflector, provided on its concave deflecting face with a narrower member spaced therefrom, and extending longitudinally of its outer edge and forming therewith an elongated discharge opening, substantially as described.

3. A window guard, operating as described, comprising an elongated curved deflector provided on its concave face with a narrower concave member spaced therefrom, the convex face of said spaced member lying adjacent the concave face of said deflector member, with the outer edges of said members forming an elongated discharge opening, substantially as described.

4. A window guard operating as described, comprising an elongated deflector member provided with a discharge opening alining with said member's deflecting face, and formed by an auxiliary strip spaced from said deflecting face, and at its inner edge extending forwardly away from the deflecting face of said deflector member to form a flaring entrance to said discharge opening, substantially as described.

5. A window guard operating as described, comprising an elongated deflector member provided with a discharge opening alining with said member's deflecting face, and formed by an auxiliary strip spaced from said deflecting face, and at its inner edge extending forwardly away from said deflector member at substantially right angles to its deflecting face to form a flaring entrance to said discharge opening, and to form a restricted neck between said entrance and discharge opening, substantially as described.

6. A window guard operating as described, comprising an elongated curved deflector provided on its concave face with a narrower concave member spaced therefrom, the convex face of said spaced member lying adjacent the concave face of said deflector member, with the outer edges of said members forming an elongated discharge opening, and the arc of curvature of said spaced member



being less than that of said deflector forming a flaring entrance to said discharge opening, substantially as described.

7. A window guard adapted to be disposed vertically adjacent one stile of a window, comprising an elongated concave deflector member having its inner edge shorter than its outer edge, and having upper and lower edges extending substantially horizontal from said outer edge for a distance, and thence at angles to meet said inner edge, and said deflector member being provided on its concave face with an auxiliary deflector member of narrower gage and spaced from said main deflector member to form an elongated discharge opening with the outer edge of said main member, substantially as described.

8. In a window guard, the combination with an upright, a stile member rigidly connected therewith, and a deflector hinged to said stile member and provided with a discharge opening in alinement with its deflecting face, substantially as described.

9. In a window guard, the combination with an upright having its ends cut away to form double inclined planes, a stile member rigidly secured to said upright, and a deflector hinged to said stile member, substantially as described.

10. In a window guard, the combination of an upright, a stile member rigidly secured to one face thereof, a deflector hinged to said

stile member, means limiting the swing of said deflector, and means forming a discharge opening at the outer edge of said deflector and in alinement with its deflecting face, substantially as described.

11. In a window guard, the combination of an upright provided at its ends with double inclines, and adapted to fit within the recess of the window stile beneath a window sash, a stile member secured to one face of said upright and adapted to rest snugly against the stile of a window, said stile member at its outer end being bent backwardly, a curved deflector, hinge connections between said deflector and the bent back portion of said stile member, means for limiting the backward swing of said deflector, an auxiliary deflecting plate disposed at the outer edge of said deflector and spaced from the concave face thereof to form an elongated discharge opening, the inside edge of said auxiliary plate being bent away from said deflector to form a flaring lip at the entrance of said discharge opening, the trough of said flaring lip, when the guard is folded, being adapted to close over said upright, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

CHARLES W. KENNON.

Witnesses:

MOSES ELY,  
CHARLES FULLER.