

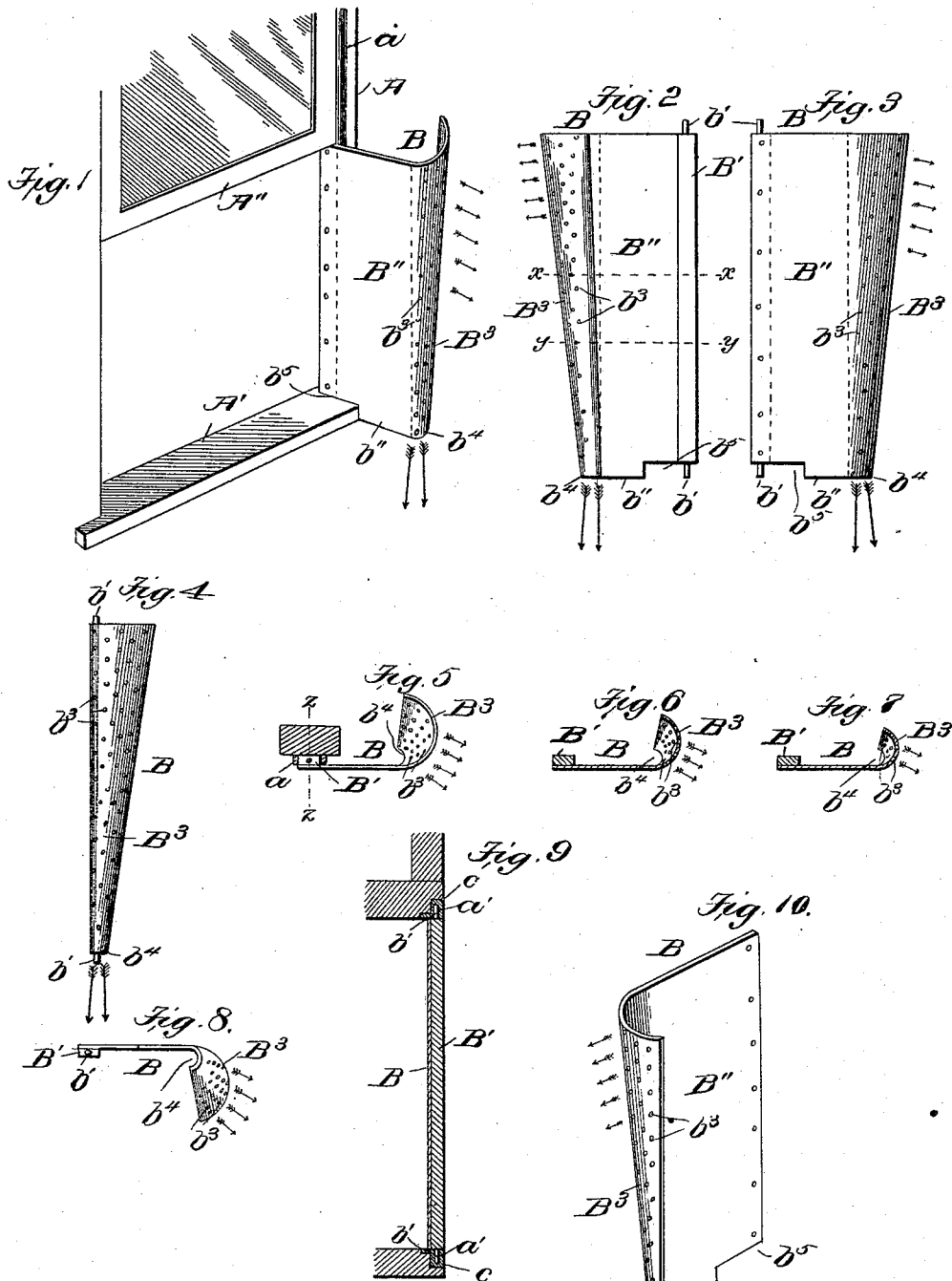
(No Model.)

S. B. ALLISON.

DUST AND CINDER GUARD FOR RAILWAY CAR WINDOWS.

No. 496,767.

Patented May 2, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL BENJIMAN ALLISON, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-HALF TO SAMUEL LOUIS GILMORE, OF SAME PLACE.

DUST AND CINDER GUARD FOR RAILWAY-CAR WINDOWS.

SPECIFICATION forming part of Letters Patent No. 496,767, dated May 2, 1893.

Application filed May 14, 1892. Serial No. 433,015. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BENJIMAN ALLISON, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Dust and Cinder Guards for Railway-Car Windows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of dust and cinder guards for railway car windows which are designed to be removably set in position at the edge of the window and project laterally therefrom, and it has for its object to provide a simple and improved guard of this class which will possess advantages in point of simplicity and inexpensiveness in construction and general efficiency in operation, and which will effectively operate to force the dust outwardly away from the car and at the same time retard or retain the large cinders or particles and drop or deposit the same at a point below the plane of the window sill.

In the drawings—Figure 1 is a perspective view showing my invention in position. Fig. 2 is a front elevation. Fig. 3 is a rear elevation. Fig. 4 is an end elevation, taken from the outer edge. Fig. 5 is a top view. Figs. 6 and 7 are transverse sectional views on the lines $x-x$ and $y-y$, respectively, Fig. 2. Fig. 8 is a bottom view. Fig. 9 is a vertical sectional view on the line $z-z$, Fig. 5. Fig. 10 is a detail perspective view showing the guard detached.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings—A designates a portion of the car window, which may be of any suitable construction, having the usual frame and sashes.

My improved guard, B, comprises a main strip, B', which is preferably adapted to fit in between the vertical sash guides or ribs, a , of the window frame, by which construction the guard device is securely retained against accidental displacement and a neat adjustment of the same is permitted. The strip B' may be secured in position against the win-

dow frame in any suitable manner, but I prefer to employ two studs or pins, $b' b'$, projecting respectively from the top and bottom ends of the strip and adapted to be received in corresponding holes or recesses, $a' a'$, respectively formed in the window sill, A', and in the under edge of the sash, A''. These holes or recesses $a' a'$ may be protected by a metallic cup or thimble, c , if desired.

Against the face of the retaining strip B' is secured the guard proper, B'', which is preferably formed of aluminum. This guard may be secured to the strip by a series of screws or in any suitable or desired manner and may also be constructed of any other adapted or desired material, and forms an outwardly-projecting plate, as shown. The guard plate has its outer edge curved to form a concave flange, B³, which extends from the top to the bottom of the plate and diminishes in width toward the lower end, whereby the outer curved concave edge of the plate forms a semi-cone substantially as shown and described. This outer curved edge of the plate is largest at the top and smallest at the bottom, the curved concave portion gradually diminishing or converging from the top to the bottom and thus forming the semi-conical flange, as clearly illustrated in Figs. 4, 5, 6 and 7. In the walls of this semi-cone B³ at the outer edge of the guard plate are provided perforations, b^3 , preferably arranged in vertical series and reduced in number toward the lower diminished or contracted end of said curved portion. The guard plate B'' is preferably extended a short distance below the sill of the window, as shown at b'' , so that the lower deposit end, b^4 , of the semi-conical outer flange terminates at a point below the plane of the window sill. In carrying out this construction, I have preferably provided a recess, b^5 , in the bottom of the guard plate at the inner end, which recess corresponds to and accommodates the projecting portion of the sill of the window.

In practice, I prefer to make a straight flat portion of the guard plate with a width of about five inches at all points from the top to the bottom, the outer curved concave flange portion being then relatively three inches in width at the top and gradually and uniformly

diminishing to a width of but one inch at the bottom.

When my improved guard is adjusted or set in position, the curved semi-conical flange
 5 has its open side toward the direction of movement of the car. The current of air and the dust and cinders are therefore received against this front face of the guard plate, and the dust and cinders as they are carried outwardly by
 10 the action of the air current are received and retained by the curved concave flanged portion. The latter, by reason of its semi-conical contour and the contraction or diminishing of its width toward the lower end, causes
 15 the dust and cinders to be forced downwardly by the pressure of the air currents coming against the concave flange, the action of the converging walls of the concave flange portion with relation to the air currents being
 20 such that the currents are forced downwardly and compressed so that they exert a considerable pressure downwardly between the converging walls of the semi-conical flange. By this downward pressure of the air currents,
 25 the dust and small particles are forced through the perforations in the walls of the flange in an outward direction away from the sides of the car, as indicated by the small arrows, while the cinders and larger particles
 30 are strained and forced downwardly to the contracted mouth or lower end of the semi-conical flange and pass off or drop from the same at a point below the plane of the window sill, as indicated by the larger arrows.
 35 From the foregoing description and explanation, it will be obvious that, by reason of my improved construction and its attendant operation, it is impossible for any particles of dust or cinders to pass around the outer edge
 40 of the guard and be carried in through the windows by the draft currents. The passage of the dust and cinders around the outer edge of the guard piece and the blowing of the same into the windows by the draft currents
 45 has been a common fault with this class of laterally projecting window guards, but, by reason of the peculiar contour and construction of my improved guard plate and its action with relation to the air currents, the
 50 dust and cinders are essentially forced under strong air pressure away from the sides of the car and the larger particles deposited at a point below the plane of the window sill, thus entirely and effectually obviating the objection
 55 above noted.

I do not wish to be understood as limiting myself to the precise construction and arrangement of parts as herein shown and speci-

fied, as it is obvious that numerous changes and modifications may be employed without departing from the spirit and scope of my invention; for instance, the guard plate may be formed of any suitable material other than metal, or the guard plate and retaining strip may be formed integral, or the aluminum or other metal of which the plate may be constructed can be extended to form the retaining strip or other means for securing the plate in position, or if desired the perforations in the semi-conical outer portion may be dispensed with. I therefore reserve the right to all such variations and modifications, which properly fall within the spirit and scope of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. An improved dust and cinder guard for railway car windows, comprising a guard plate having a curved or concave portion at its outer edge, as at B³, gradually contracted or diminished downwardly toward the bottom and forming a semi-cone, and provided with perforations in this semi-conical portion, substantially as and for the purpose set forth.

2. An improved dust and cinder guard for railway car windows, comprising a retaining strip or portion as at B', and a guard plate projecting outwardly therefrom and comprising a flat main or body portion, as at B'' having a curved or concave flanged portion at its outer edge as at B³, gradually diminished or contracted in width downwardly toward the bottom and forming a semi-cone, substantially as and for the purpose set forth.

3. An improved dust and cinder guard for railway car windows, comprising a retaining strip or portion, and a guard plate projecting outwardly therefrom and provided at its outer edge with a curved or concave portion extending from top to bottom and gradually diminished or contracted in width downwardly to an outlet at the bottom, the converging walls of said concave flanged portion being perforated and the outlet or lower end of the guard being extended to a point adapted to come below the plane of the window sill when the guard is in position, substantially as and for the purpose set forth.

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

SAMUEL BENJIMAN ALLISON.

Witnesses:

J. REED LITTELL,
 E. L. WHITE.