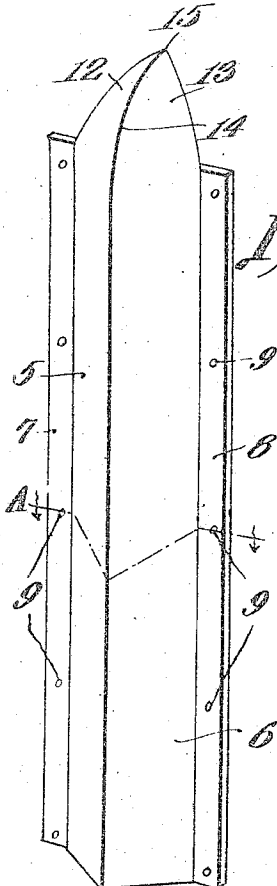
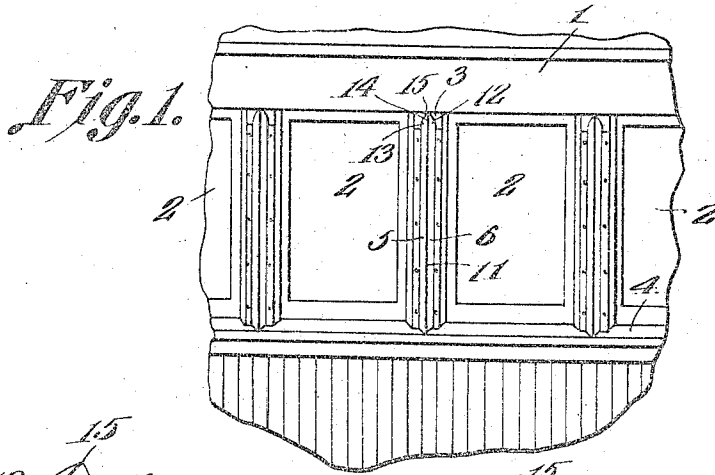


D. A. SOX.
CINDER DEFLECTOR.
APPLICATION FILED DEC. 5, 1912.

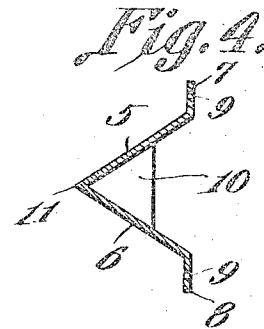
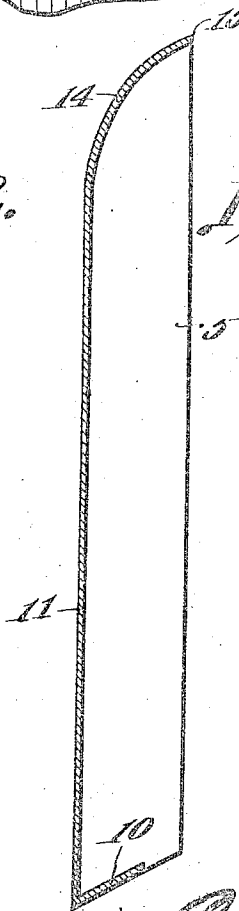
1,063,299.

Patented June 3, 1913.



Witnesses

J. P. [Signature]
S. Willow



David A. Sox,
Inventor

by

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

DAVID A. SOX, OF CARROLLTON, GEORGIA.

CINDER-DEFLECTOR.

1,063,299.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed December 5, 1912. Serial No. 735,164.

To all whom it may concern:

Be it known that I, DAVID A. SOX, a citizen of the United States, residing at Carrollton, in the county of Carroll and State of Georgia, have invented a new and useful Cinder-Deflector, of which the following is a specification.

This invention relates to an attachment to be positioned upon the stiles of a car window, in order to prevent cinders from entering the said window.

The object of this invention is to provide a device of simple construction which will deflect the cinders and prevent them from entering the car window and is further adapted to protect one of two windows according to the direction in which the car upon which my device is installed, is traveling.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings accompanying this specification and forming a part thereof, the preferable form of my invention has been illustrated, in which—

Figure 1 is a view in elevation of a section of a car with my improved cinder deflector in position thereon. Fig. 2 is a view in perspective of my improved cinder deflector, and Fig. 3 is a vertical sectional view taken through the central portion of the above. Fig. 4 is a sectional view on the line A—A of Fig. 2.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 represents the side wall of a passenger coach which is provided with a plurality of windows 2 having the usual stiles or upright posts 3 therebetween. The longitudinal sill is represented at 4 and has the usual outward and downward inclination.

Mounted upon the stiles 3 is my improved deflector which is preferably made from sheet metal, it being understood in this connection that I do not wish to limit myself

to the use of metal as it will be readily apparent that other materials might be used in order to secure the desired result. The cross sectional view, illustrated in Fig. 4 shows the deflector to be substantially triangular in outline and composed of the wings or walls 5 and 6 meeting at a line or apex 11 to define an acute-angular edge. Formed integral with the side wings or walls are the outlying extensions or securing flaps 7 and 8. These flaps are provided with a suitable number of apertures 9 therein through which suitable retaining means such as screws or nails are passed to thereby securely hold the deflector in position upon the stile.

The lower extremities of the side wings or walls 5 and 6 are obliquely inclined as illustrated in Fig. 3 and have extending therebetween a triangular reinforcing web 10. This formation allows the lower end of the deflector to fit snugly against the window sill 4. The upper end of the deflector is formed by the extensions 12 and 13 of the side walls 5 and 6 respectively, these extensions being arcuated or domed and meeting to form an acute angle on the quadrantal line 14 which is in continuation of the vertical acute-angular outer edge 11 and terminates at the uppermost apex 15, the purpose of this rounded upper ribbed dome shaped end being more fully hereinafter set forth.

With my improved duplex or double cinder deflector mounted in position upon the stiles between the windows it will be apparent that a single deflector will serve as a shield for either of two windows according to the direction of travel of the car. By the particular conformation of the upper extreme end thereof, the cinders in falling downwardly will also be deflected away from the car windows, which is very essential in a device of the class described. The triangular formation of the side walls will cause a draft or current of air to flow outward and away from the car window which current of air will carry therewith cinders and dust and to thereby prevent the same from entering the car.

The efficiency of a device of this kind is directly proportionate to the adoption of a transverse or cross sectional form, which is a mean between the two extremes represented respectively by a flat plate or board extending directly outward from the wall of

the car and an inclined or horizontally V-shaped structure, in which the faces are disposed at such an angle to each other (as for example, a right angle or obtuse angle) as to permit cinders, smoke and dust to find their way around the outer edge, by reason of not being positively projected or deflected outwardly or from the car by impact against that face of the deflector which is forward. In the case of a flat deflector board or plate, the suction produced in rear thereof is sufficient to neutralize to some extent the deflecting effect of the device, by drawing a portion of the dust and smoke into the space in rear thereof, from which point it can gain access to the window, and with a relatively obtuse-angled deflector the surface against which the dust and cinders strike does not serve to project the materials outward from the car wall with sufficient positiveness, and this fact applies with equal force to the upper end of the deflector, which must be relied upon to take care of those cinders which approach the deflector from above or in a downward and rearward direction, with reference to the direction of movement of the car.

By providing a deflector with faces disposed in an outwardly convergent relation with reference to the car wall, so that they meet to define an acute-angular vertical edge which merges at its upper end into a quadrantal curve which maintains the acute-angular transverse formation and extends inward to the side of the car, or to what may be termed the base or securing plane of the deflector, the downwardly and rearwardly approaching cinders are effectively disposed of, and are deflected in such a way as to prevent them from finding their way over the deflector to the zone in the rear thereof, and thus from gaining access to the window. At the same time, the downwardly and outwardly inclined lower edges

of the wings of the deflector embodying my invention, in addition to conforming to the sill of the standard car, serve to neutralize any tendency of dust to pass under the deflector and thus enter the zone in rear of the same. The reinforcing web, in addition to strengthening and stiffening the structure at its lower end, serves to exclude moisture from the space between the wings or walls and prevents the formation of a suction at that point should the deflector overhang the outer edge of the car window sill.

Having thus fully disclosed the construction and operation and pointed out the advantages of my improved cinder deflector, what I claim to be new and original with me is:—

A cinder-deflector for car windows designed for attachment to the exterior surface of a car wall between adjacent windows and above the sill thereof, the same being horizontally V-shaped and comprising angularly disposed wings or walls connected at their front edges to define a vertical acute-angular outer edge and curved toward each other at their upper ends to form a dome, and meeting to define an acute angle on a quadrantal curve in continuation of said vertical outer edge, the lower edges of the sides or wings being inclined downwardly and outwardly to conform to, and bear upon, the window sill and form cinder-deflecting elements projecting below the plane of the window opening, and a web or plate connecting the wings or walls at their lower ends.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

DAVID A. SOX.

Witnesses:

F. J. H. ROBERTSON,
D. F. PEARCE.