

No. 660,941.

Patented Oct. 30, 1900.

G. C. ZANG.

DEFLECTOR FOR LOCOMOTIVE ENGINE CABS.

(Application filed Mar. 31, 1900.)

(No Model.)

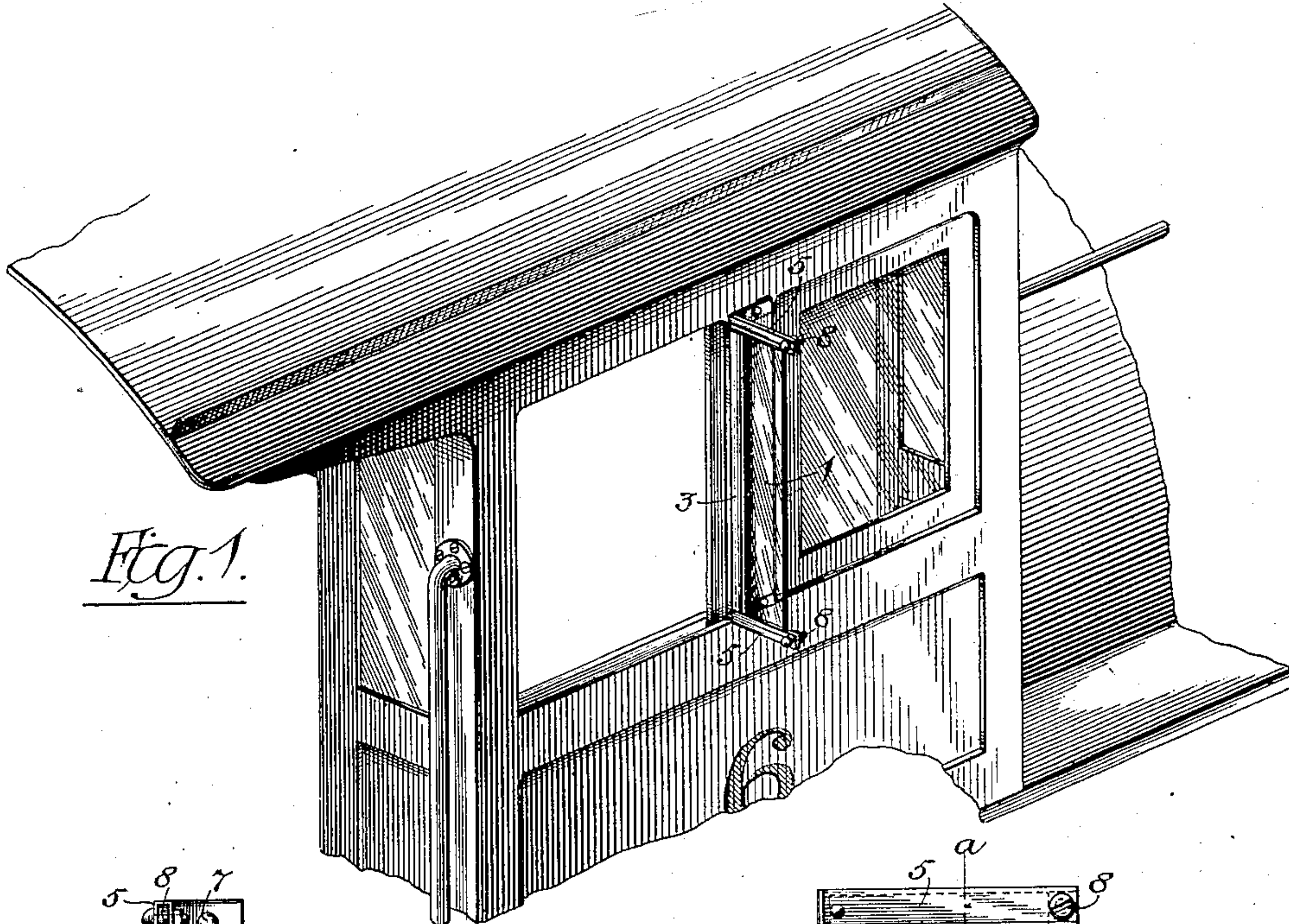


Fig. 1.



Fig. 3.

Fig. 4.

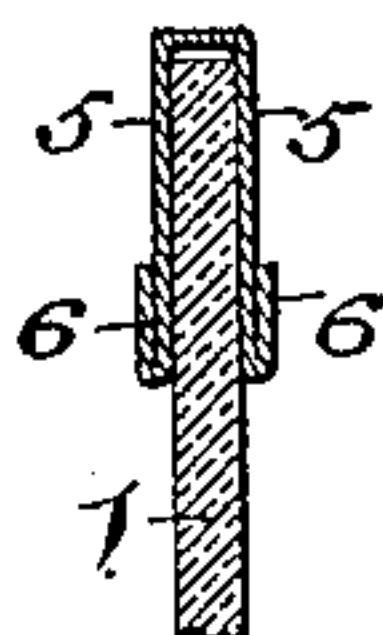


Fig. 5.

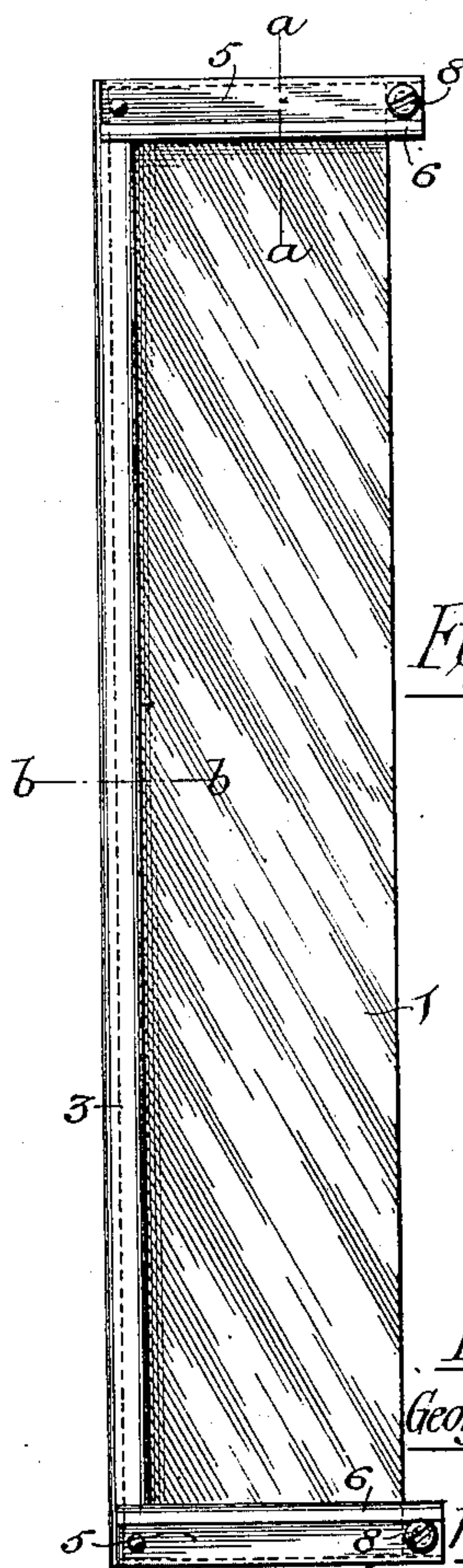
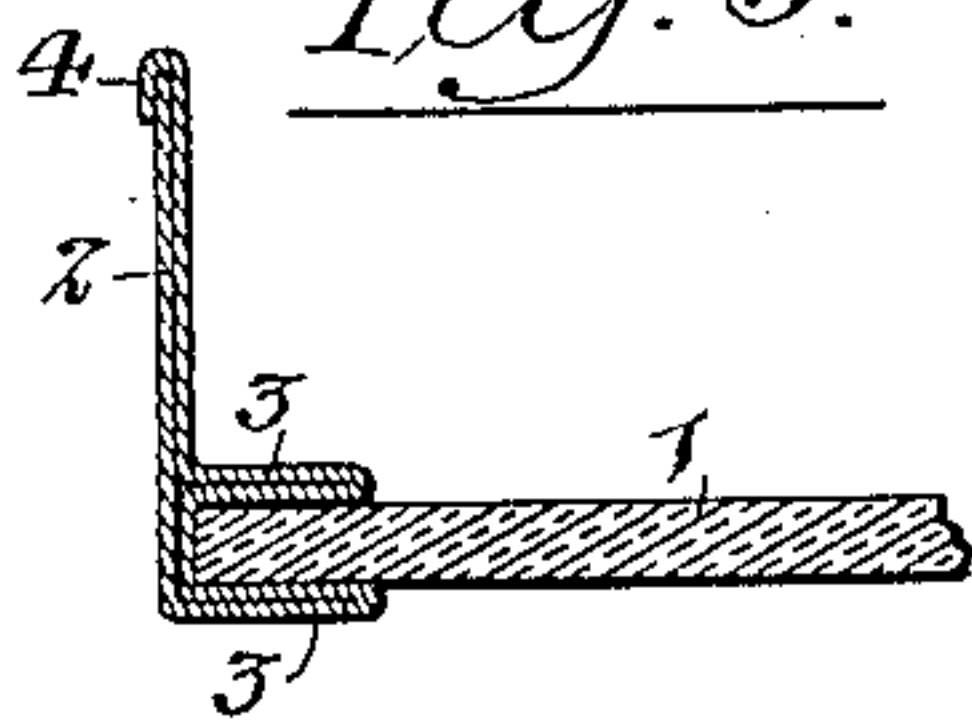


Fig. 2.

Witnesses:

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GEORGE CHARLES ZANG, OF PHILADELPHIA, PENNSYLVANIA.

DEFLECTOR FOR LOCOMOTIVE-ENGINE CABS.

SPECIFICATION forming part of Letters Patent No. 660,941, dated October 30, 1900.

Application filed March 31, 1900. Serial No. 10,983. (No model.)

To all whom it may concern:

Be it known that I, GEORGE CHARLES ZANG, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Deflectors for Windows of Locomotive-Engine Cabs, of which the following is a specification.

The object of my invention is to provide the cab of a locomotive with means whereby when the engineer is looking ahead out of the window in the side of the cab his eyes will be protected from the rush of air and from flying dust and cinders, while at the same time his view ahead will be entirely unobstructed. This object I attain by mounting on the side of the cab, in front of the window-opening therein, a projecting deflector of glass or other transparent material free from any frame or inclosure at the outer edge.

In the accompanying drawings, Figure 1 is a perspective view of part of the cab of a locomotive-engine, showing my improved deflector applied thereto. Fig. 2 is a side view of the deflector on a larger scale. Fig. 3 is an end elevation of the same. Fig. 4 is an enlarged section on the line *a a*, Fig. 2; and Fig. 5 is an enlarged section on the line *b b*, Fig. 2.

Engineers of locomotive-engines frequently suffer great inconvenience and are often incapacitated from performing their duty by having dust or cinders blown into the eyes while looking ahead out of the window in the side of the cab, or even by the rush of air into the face when the engine is running at high speed. Hence some form of screen or deflector for preventing this is very desirable; but, so far as I am aware, no such screen or deflector has heretofore been devised which would not so restrict the forward view of the engineer as to render its use impracticable. My invention, however, provides an efficient means for protecting the eyes of the engineer from the rush of air, rain, or snow or hail or from flying dust and cinders without at all restricting his forward view, and hence is free from the objection which I have noted.

The deflector consists of a strip or plate 1 of glass or other transparent material mounted in a frame secured to the side of the cab in front of the engineer's window, this frame, however, confining the transparent plate only

on the inner edge and at top and bottom, the outer edge of the plate being uninclosed, so that there is no frame or other opaque body interposed in the line of vision of the engineer looking forwardly out of the cab-window, while at the same time the deflector projects sufficiently to effectually prevent wind, rain, hail, snow, dust, or cinders from blowing into the eyes.

The frame of the deflector is preferably composed of sheet-metal plates in order to restrict its dimensions to a minimum while preserving the necessary strength. The plate which confines the inner edge of the deflector is preferably bent so as to form the double web 2 for attachment to the side of the cab, and double ribs or flanges 3 3, projecting at right angles therefrom, to provide a groove or pocket for the reception of the inner edge of the deflector 1, the edge of the web 2 being stiffened or strengthened by lapping the strip of sheet metal, as shown at 4 in Fig. 5. The top and bottom bars of the deflector-frame each consist of a strip of sheet metal bent into U form, as shown at 5 in Fig. 4, the edges of the strip being folded back so as to form stiffening-ribs 6, and each of the top and bottom bars is bent at right angles at its inner end so as to lie against the plate 2, to which it is secured by a rivet 7 or other suitable fastening, as shown in Fig. 3, the ribs or flanges 3 being discontinued at top and bottom of the inner bar, as shown in Fig. 2, so as to permit this connection of the upper and lower bars of the frame to said inner bar. The deflector-plate 1 is retained in position laterally in the frame thus constructed by means of transverse pins or bolts 8, which extend across the grooved top and bottom bars 5 of the frame at points beyond the outer edge of the deflector-plate, as shown in Figs. 2 and 3.

While I prefer to use the form of frame which I have described, because it combines the qualities of maximum strength and minimum bulk, I do not wish to restrict myself thereto, as a frame of wood or other material may be employed without departing from the essential features of my invention.

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

1. A transparent deflector mounted upon

and projecting from the side of a locomotive-cab in front of the window-opening therein and having its outer edge uninclosed, substantially as specified.

- 5 2. The combination of a transparent deflector with a frame mounted upon the side of a locomotive-cab in front of a window-opening therein, the top and bottom bars of said frame projecting beyond the deflector-plate

and having retainers engaging with the outer edge of said plate, substantially as specified. 10

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

GEORGE CHARLES ZANG.

Witnesses:

F. E. BECHTOLD,
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