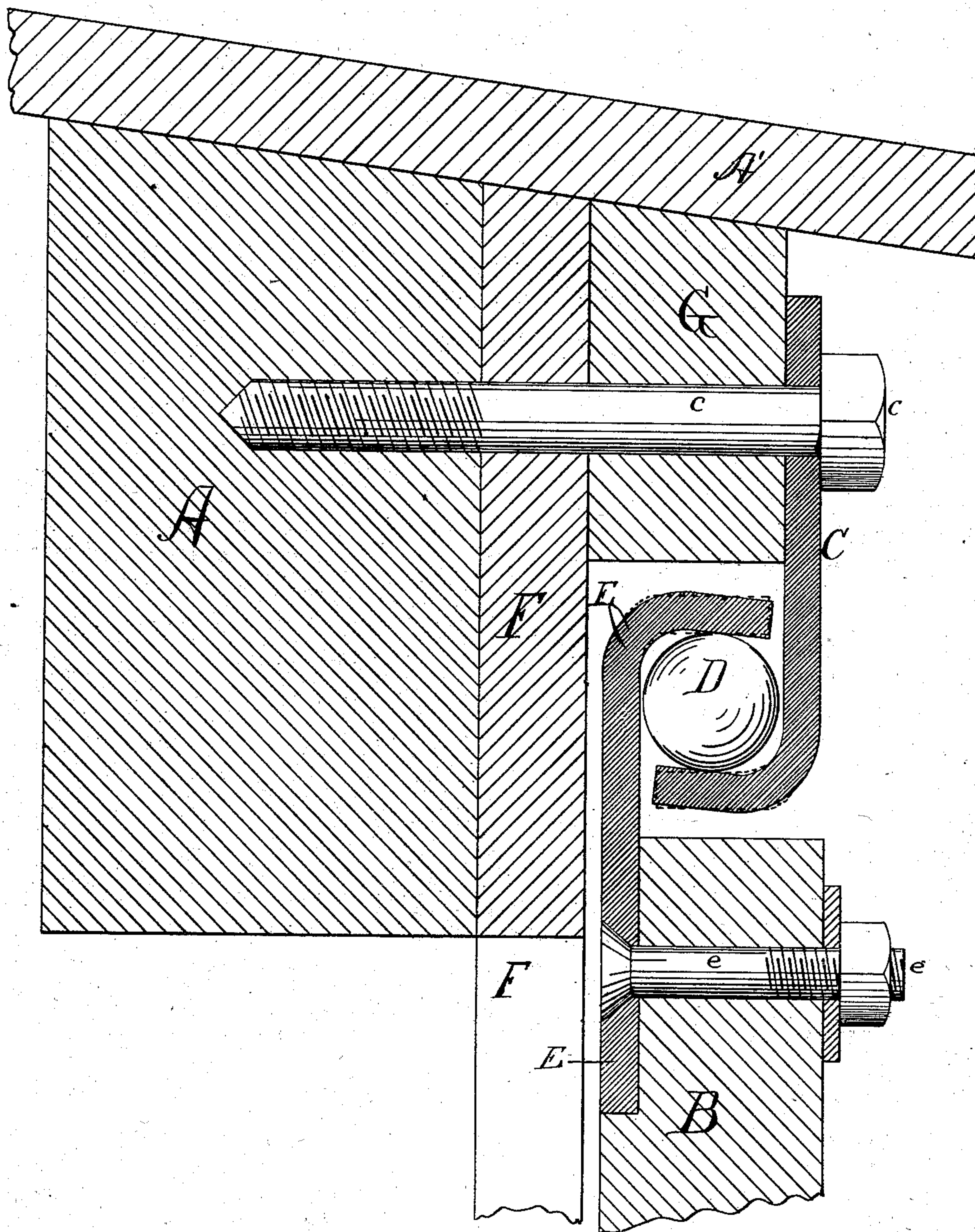


(No Model.)

D. F. VAN LIEW.  
CAR DOOR HANGER.

No. 254,889.

Patented Mar. 14, 1882.



WITNESSES—  
*J. Everett Brown*  
*A. Munday*

INVENTOR—  
*Dennis F. Van Liew*  
By *Munday, Evans & Adcock*  
his Attys



# UNITED STATES PATENT OFFICE.

DENNIS F. VAN LIEW, OF AURORA, ILLINOIS.

## CAR-DOOR HANGER.

SPECIFICATION forming part of Letters Patent No. 254,889, dated March 14, 1882.

Application filed January 17, 1882 (No model.)

*To all whom it may concern:*

Be it known that I, DENNIS F. VAN LIEW, of Aurora, Kane county, State of Illinois, have invented certain new and useful Improvements  
5 in Car-Door Hangers, of which the following is a specification.

This invention is an improvement upon the ball-and-socket car-door hangers shown in Letters Patent to Alexander N. Monteer, reissued  
10 to myself as assignee on the 27th of April, A. D. 1880; and more especially does it relate to the elongated sockets provided for the balls by my patent of August 2, 1881. It is designed to prevent the door from rubbing against  
15 the wall of the car when the door is being opened or closed; and it consists in the novel construction of the sockets, as hereinafter set forth.

The accompanying drawing gives a vertical  
20 section through the door, the hanging devices, and the car-side, illustrating the present invention; and therein A represents the plate or car-side, A' the roof, and B the door. F is the outside covering of the car; and G the cornice  
25 under the roof, to which the carrier device is attached. C is the curved metal carrier, secured to the car-side by lag-screws *c*, and is similar to the carrier shown in my said patent of August 2, 1881, except that the horizontal  
30 part thereof, which forms the floor of the socket and supports the ball, is bent slightly above and beyond the true horizontal, so as to form a sort of trough, or, more accurately speaking, to give the ball a surface to roll on, which  
35 throughout its length is laterally inclined away from the car, as shown. By this feature the chilled ball or roller D is caused to gravitate away from the car, and it transmits this tendency to the door itself by giving to the horizontal  
40 portion of the metal hanger E, which is

secured to the door by bolts *e*, or equivalent fastenings, and is likewise similar to the hanger disclosed in my said patent, a like lateral bend from the true horizontal, though in this case the bend is downward instead of upward. This  
45 clearly appears in the drawing, where the broken lines show the formation of the carrier and hanger as formerly made and as given in the prior patent. It will be readily seen that the hanger thus bent will naturally incline  
50 away from the car-side if the ball does resist such tendency, and that the ball itself, so far from resisting, will increase said tendency by its own bent outward from the car.

Instead of giving the horizontal portions  
55 of the carriers and hangers the inclinations shown, the same result may be obtained by forming therein longitudinal channels, in which the ball will travel, locating such channels so that the rubbing will be avoided, and in this  
60 way all contact between the ball and the sides of its socket may also be prevented. This I regard as the equivalent of the construction shown.

I have found by actual use that my present  
65 invention renders the operation of the door very easy, and that it avoids the scraping action against the car-side usually found in all outside doors.

I claim—

The ball-and-socket hanger composed of the  
70 carrier, the hanger, and the ball, both carrier and hanger having laterally-inclined horizontal surfaces or channels upon said surfaces, substantially as and for the purpose set forth. 75

DENNIS F. VAN LIEW.

Witnesses:

H. M. MUNDAY,  
EDMUND ADCOCK.