

(No Model.)

A. E. SHURE.  
RAILWAY CAR WINDOW.

No. 486,220.

Patented Nov. 15, 1892.

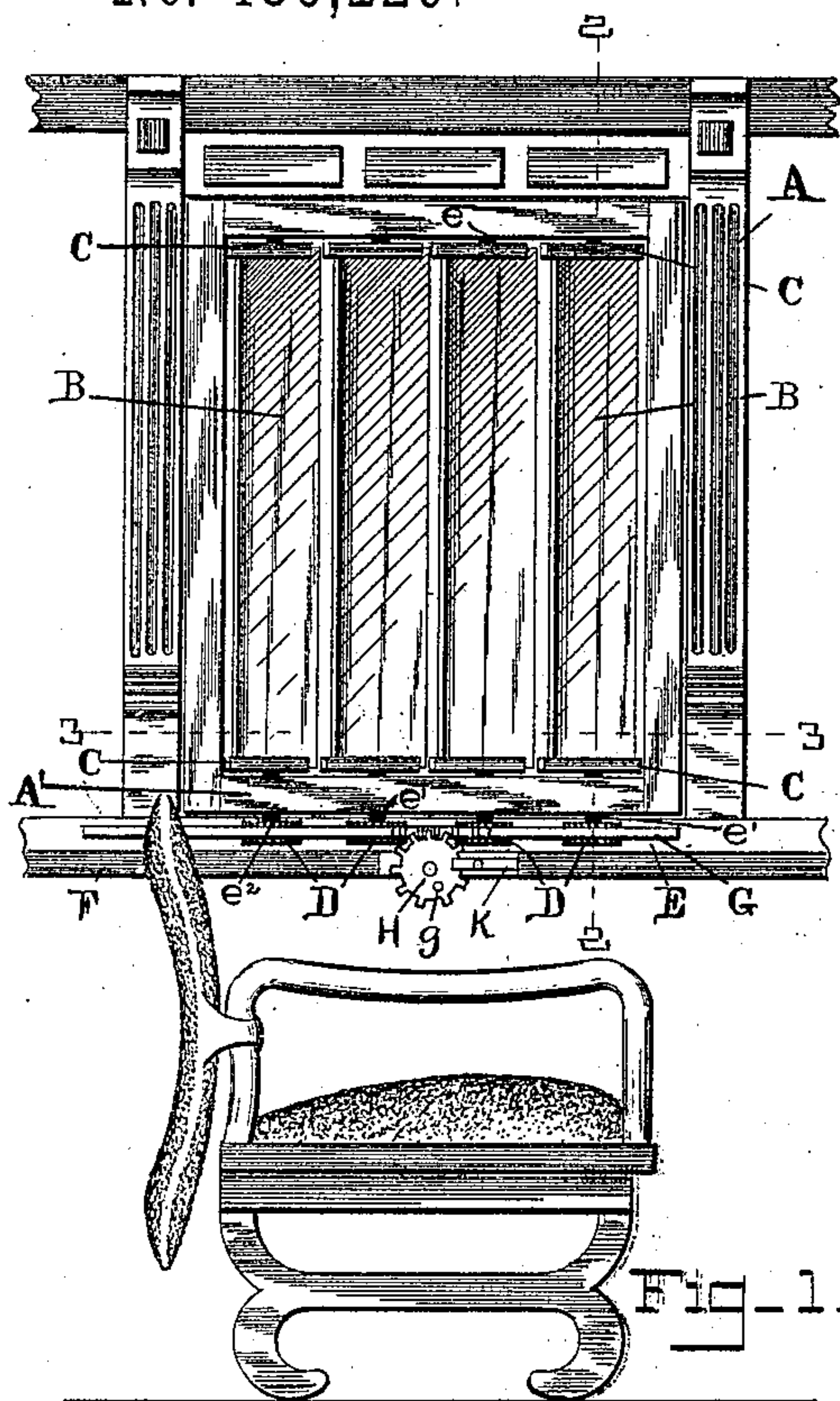


Fig. 1-

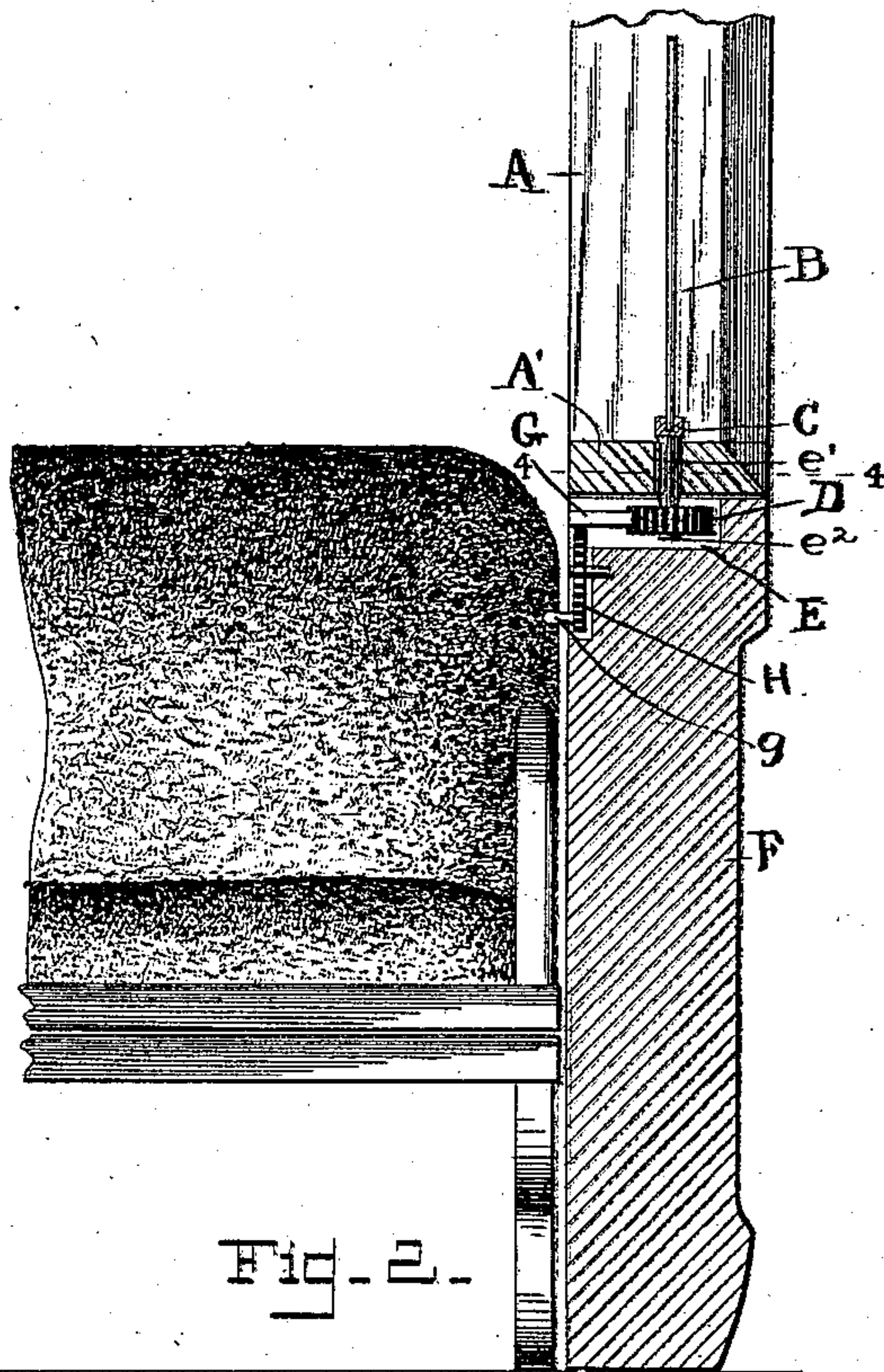


Fig. 2-

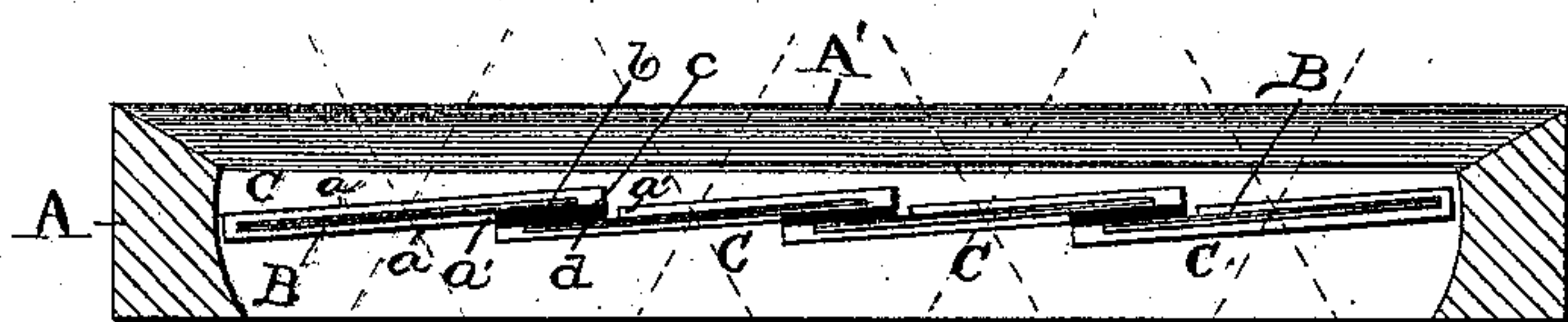


Fig. 3-

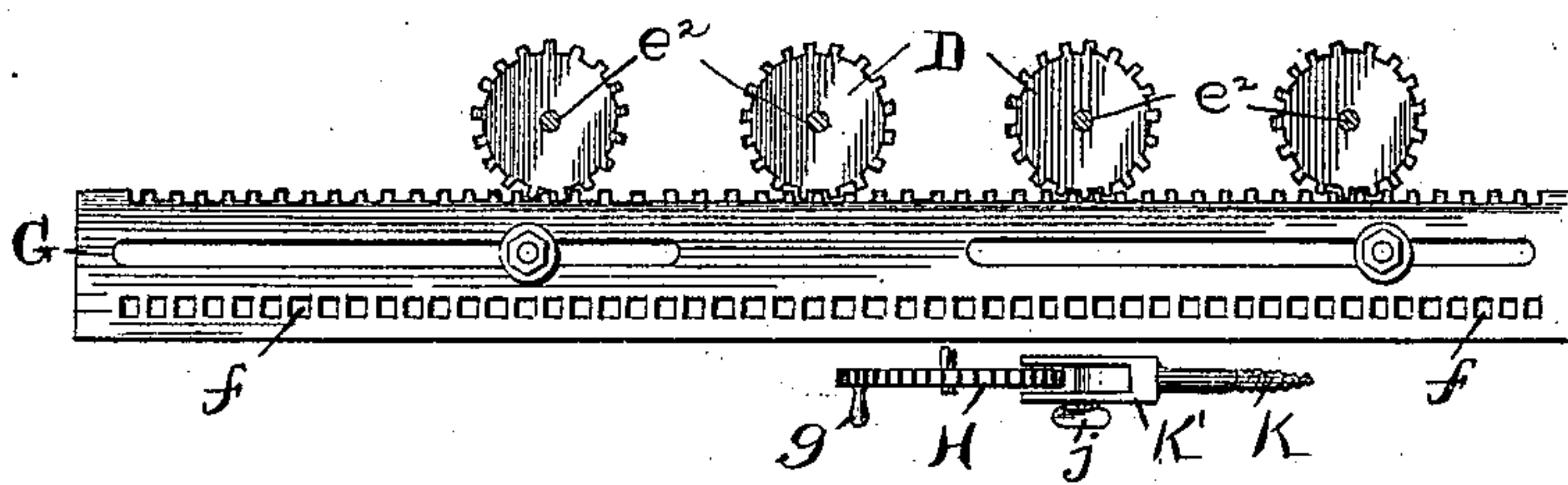


Fig. 4-

Witnesses:  
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# UNITED STATES PATENT OFFICE.

ARTHUR E. SHURE, OF SHURE'S LANDING, MARYLAND.

## RAILWAY-CAR WINDOW.

SPECIFICATION forming part of Letters Patent No. 486,220, dated November 15, 1892.

Application filed December 23, 1891. Serial No. 415,967. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR E. SHURE, a citizen of the United States, residing at Shure's Landing, in the county of Harford and State of Maryland, have invented certain new and useful Improvements in Railway-Car Windows, of which the following is a specification.

This invention relates to an improved ventilating and dust-arresting window for railway-cars, and is illustrated in the accompanying drawings, in which—

Figure 1 shows a view of the window from the inside of the car; Fig. 2, a vertical section on the line 2 2, Fig. 1; Fig. 3, a cross-section on line 3 3, Fig. 1; and Fig. 4, a section on line 4 4, Fig. 2, with the operating-wheel removed to one side.

The letter A designates the window frame or casing. The window is made up of a number of overlapping strips or panes of glass B, arranged vertically in said case. Each pane is held at its opposite ends in grooved strips or blocks C. The end of the pane fits in the groove of the block, and the portions *a* of the latter on opposite sides of said groove extend along the opposite sides of the pane. Each of said portions *a* terminates at one end *a'*, so as to leave an overlapping surface *b* of glass, and at its opposite end has a flange *c* to take over the side edge of the glass, but not project past the surface of said glass. By this construction the glass is held securely without metal fastenings, which would be objectionable for obvious reasons. Putty will be used where the grooved strips fit against the glass, and along the overlapping part of the latter a strip *d*, of rubber, felt, or other suitable material, will be fastened to prevent clashing of the glass together and to make an air-tight and dust-proof closure. This strip of soft material will extend over the surface of the flange *c*, which is flush with that of the glass, and be secured thereto, whereby it forms an additional means of holding the glass in the groove of the block.

Each of the holders C is provided with a trunnion. The trunnions *e* at the top are journaled in the top bar of the frame A, and the trunnions *e'* at the bottom extend through the sill A' of said frame and project below the same. The projecting ends *e''* of said trunnions carry pinions D. These pinions are con-

tained in a chamber E, formed in the framework F of the car under the sill A'. This chamber also contains a rack G, which meshes with all said pinions and occupies a horizontal plane. Said rack has a longitudinal series of square openings *f*, and in a suitable recess in the side of the framework F is a toothed wheel or disk H, whose teeth engage said longitudinal series of openings. This wheel has a knob *g*, by means of which it is revolved, and by turning it the rack G is moved and the pinions D actuated. A screw K is fastened in the framework F and has a projecting bifurcated end K', whose forks extend on opposite sides of the wheel H. By means of a set-screw *j* these forks are made to lock the said wheel at any position desired.

The operation is as follows: By revolving the wheel H the panes of glass composing the window may be turned to an angular position—such as indicated by dotted lines in Fig. 3—through the medium of the rack D and pinions D. This, it will be observed, admits air between the plates for ventilation, and at the same time keeps out dust and flying cinders from the engine, which are a great annoyance to the traveling public. By further revolving the wheel H the panes may be turned to a reverse angular position (also indicated in dotted lines in Fig. 3) when the train is going in an opposite direction.

It will be seen that this window is a thorough ventilator and dust-arrester.

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

1. In a railway-car, a window comprising a series of vertically-arranged overlapping panes of glass mounted at their opposite ends in holders which are journaled in the window-casing, the lower holders having trunnions extending through the sill of said casing and carrying pinions on their projecting ends, a chamber in the car-framework containing said pinions, a rack-bar in said chamber, having teeth in one edge which mesh with said pinions and also a longitudinal series of openings, and a toothed wheel engaging said openings and accessible from the interior of the car for turning it and thereby sliding the rack-bar, in the manner and for the purpose described.

2. In a railway-car, a window comprising



a series of vertically - arranged overlapping  
panes of glass mounted at their opposite ends  
in holders which are journaled in the window-  
casing, the lower holders having trunnions ex-  
5 tending through the sill of said casing and  
carrying pinions on their projecting ends, a  
rack-bar having teeth in one edge which mesh  
with said pinions and a longitudinal series of  
openings, a toothed wheel engaging in said  
10 openings and accessible from the interior of  
the car, and a locking device applied to said  
wheel for fixing it at different positions.

3. In a railway-car, a window comprising  
a series of vertically - arranged overlapping  
15 panes of glass mounted at their opposite ends  
in holders which are journaled in the window-

casing, the lower holders having trunnions ex-  
tending through the sill of said casing and  
carrying pinions on their projecting ends, a  
rack meshing with said pinions, a toothed 20  
wheel or disk engaging said rack and accessi-  
ble from the inside of the car, and a bifur-  
cated fastening whose forks extend on oppo-  
site sides of the wheel and are provided with  
a set-screw for locking the latter. 25

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

ARTHUR E. SHURE.

Witnesses:

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JNO. T. MADDOX.