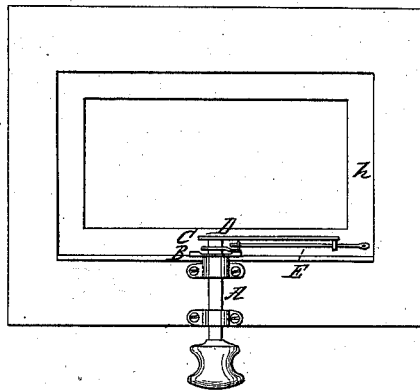


*E. Lockwood,*

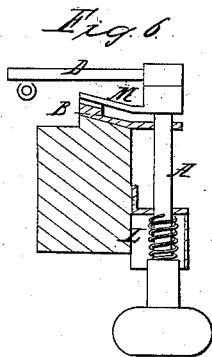
*Shutter Worker.*

*N<sup>o</sup> 54,818.*

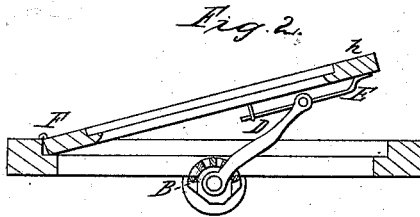
*Patented May 15, 1866.*



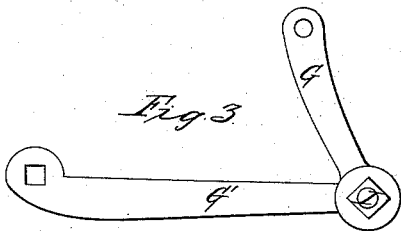
*Fig. 1.*



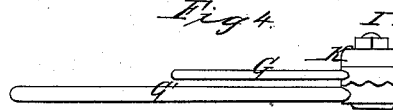
*Fig. 6.*



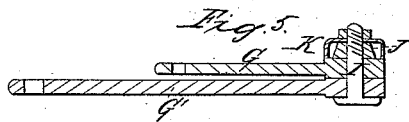
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*

*Witnesses:*

*J. E. Shaw*  
*Geo. Buckley*

*Inventor:*  
*Edwin Lockwood*

# UNITED STATES PATENT OFFICE.

EDWIN LOCKWOOD, OF BORDENTOWN, NEW JERSEY, ASSIGNOR TO HIMSELF AND WM. H. CARRYL, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVED DEVICE FOR OPERATING SASHES OF VENTILATING-WINDOWS.

Specification forming part of Letters Patent No. 54,818, dated May 15, 1866.

### *To all whom it may concern:*

Be it known that I, EDWIN LOCKWOOD, of Bordentown, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Devices for Opening and Closing the Ventilating-Windows of Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming a part of this specification, in which—

Figure 1 is a side view of a ventilating-window with my improvements applied. Fig. 2 is a perspective view of my improvements, showing the manner in which some of the parts are connected with the frame of the window, which is partially open. Figs. 3, 4, and 5 represent, respectively, a plan, an elevation, and a vertical section of a modification of my improvement. Fig. 6 is a vertical section, showing, as a modification, the spring L and a rigid pawl, M.

My invention consists of a device for regulating the opening and closing of the ventilating-windows of railroad-cars, so as to secure the desired amount of ventilation.

In Figs. 1, 2, and 6, A is a rod secured to the frame of the window by staples or strips, as shown. This rod passes through a corrugated plate or ratchet, B, which is fastened to the window-frame. The rod A has attached

to it a spring-pawl, C, and the lever D, Fig. 1, the pawl and lever being rigidly fastened to the rod and turning when it is turned. The outer end of lever D is connected by means of a hook or link with the hasp E, which is on the window-sash. The window being hinged, as at F, Fig. 2, when the rod A is turned, the link of the lever D slides on the hasp E, and the window is opened or closed more or less, as desired. The spring C presses against the corrugated plate or ratchet B with sufficient strength to hold the lever D in the position in which it is set.

In practice I find it preferable to employ the spring L and the rigid pawl M, Fig. 6, the latter being used instead of the spring-pawl C, Fig. 1. Then when it is desired to open or close the window the rod A is first pushed up, thereby disengaging the pawl M from the ratchet.

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

The combination of the rod A, lever D, spring L, pawl M, and ratchet or corrugated plate B, in the manner and for the purpose substantially as shown and described.

EDWIN LOCKWOOD.

Witnesses:

J. E. SHAW,  
GEORGE BUCKLEY.