(No Model.)

W. H. HEFFLEY.

PNEUMATIC CAR WINDOW.

No. 589,831. Patented Sept. 14, 1897.

Fig. 1.

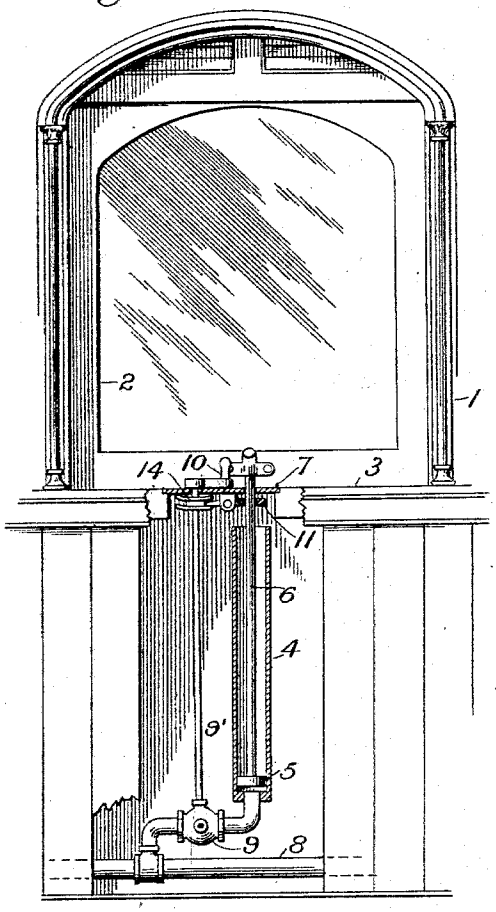


Fig. 2.

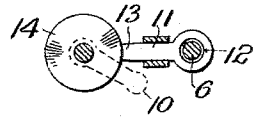


Fig. 3.

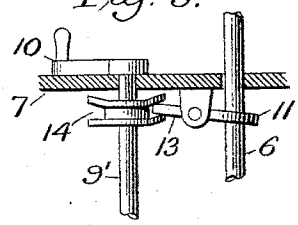
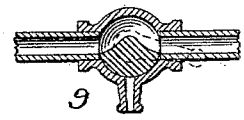


Fig. 4.



WITNESSES

James F. Duhamel

A. M. Boynton

INVENTOR,
WILLIAM H. HEFFLEY,
By John Heddenberg
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. HEFFLEY, OF ST. PAUL, KANSAS.

PNEUMATIC CAR-WINDOW.

SPECIFICATION forming part of Letters Patent No. 589,831, dated September 14, 1897.

Application filed February 1, 1897. Serial No. 621,432. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HEFFLEY, a citizen of the United States, residing at St. Paul, in the county of Neosho and State of Kansas, have invented certain new and useful Improvements in Pneumatic Car-Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a novel construction in devices for controlling windows, sashes, and the like, and has for its object to provide a device by means of which a window or sash can be raised or lowered, and, furthermore, by means of which the same can be held in any desired position.

The invention also consists in the features of construction hereinafter more particularly set forth and specifically claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation of a window provided with devices constructed in accordance with this invention, and Fig. 2 is an enlarged cross-section just below the window-sill. Fig. 3 is a view of the clutching mechanism. Fig. 4 is a sectional view of the cock.

Referring now to said drawings, 1 indicates the window-frame, and 2 the window. Situated below the sill 3 is a cylinder 4, and within this cylinder is a piston 5, the piston-rod 6 of which extends upwardly and through a plate 7 upon the sill 3 and is connected with the window-sash 2. The lower end of the cylinder 4 communicates with a pipe or passage 8 for supplying a propelling medium, such as compressed air. The cock 9 at the lower end of the cylinder is arranged to establish communication between the pipe or passage 8 and the cylinder or for cutting off this communication and opening the lower end of the cylinder to the atmosphere to allow the escape of air. Said cock is controlled by a rod 9′, extending upwardly and provided with a handle 10 at the upper face of the plate 7. Pivoted on the lower face of the plate is a clutch-dog 11, having an opening 12, through which the piston-rod 6 extends, while the end 13 of said clutch-dog 11 is situated to be engaged by a cam 14 upon the rod 9′. The parts are so arranged that when the rod 9′ is turned to the extreme left the cam lifts the outer end of the clutch-dog to cause the rod to be clutched, while when the rod 9′ is turned to the right the clutch-dog is free.

The parts operate in the following manner: When the window is to be raised, the handle 10 is turned to the right, which allows the compressed air to enter the cylinder, which causes the piston to rise and consequently the window. In rising the piston-rod passes freely through the dog, as is obvious. When the handle is turned to cut the air off, the settling of the window will throw the piston-rod into engagement with the clutch-dog, so that the parts will be firmly held in this position. When the handle is turned to the left to open the lower end of the cylinder to the atmosphere, the cam 14 engages the tip 13 of the clutch-dog and holds it in a position to allow the piston-rod to pass through the same, and thus as the air escapes the window is closed. As before pointed out, by turning the handle to the extreme left the clutch-dog is thrown into operative position with the piston-rod to prevent the window from being raised.

It is understood, of course, that this device can be used without the employment of compressed air as a medium for raising and lowering the piston and simply as a device for holding the window in any adjusted position, it being noted that said parts can be used in this manner and will effectually prevent the window from falling, as will be clearly seen.

It is further noted that although I have shown the rod 6 as situated at the middle of the window, yet two of these rods could be employed equally as well which would be situated at each side of the window, the construction otherwise being the same.

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

1. The combination with a sliding window, of a cylinder having a piston connected with said window, passages communicating with the lower end of said cylinder and with a source for supplying the controlling medium and with the atmosphere, a cock for controlling said passages, a rod for controlling said cock, and a clutch for engaging the said piston-rod and situated to be moved by said controlling-rod.

2. The combination with the movable piston-rod and the rotatable rod for controlling the cock as shown, of a pivoted clutch-dog through which said piston-rod passes, and a cam carried by said cock-controlling rod and engaging said clutch-dog.

3. The combination with a sliding window having a downwardly-extending rod, of a clutch engaging said rod and a controlling-rod for moving said clutch.

4. The combination with a sliding window having a downwardly-extending rod, of a pivoted clutch-dog engaging said rod and a cam carried by a controlling-rod and engaging said clutch-dog.

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

WILLIAM H. HEFFLEY.

Witnesses:
C. O. BAYER,
I. P. WILLIAMS.