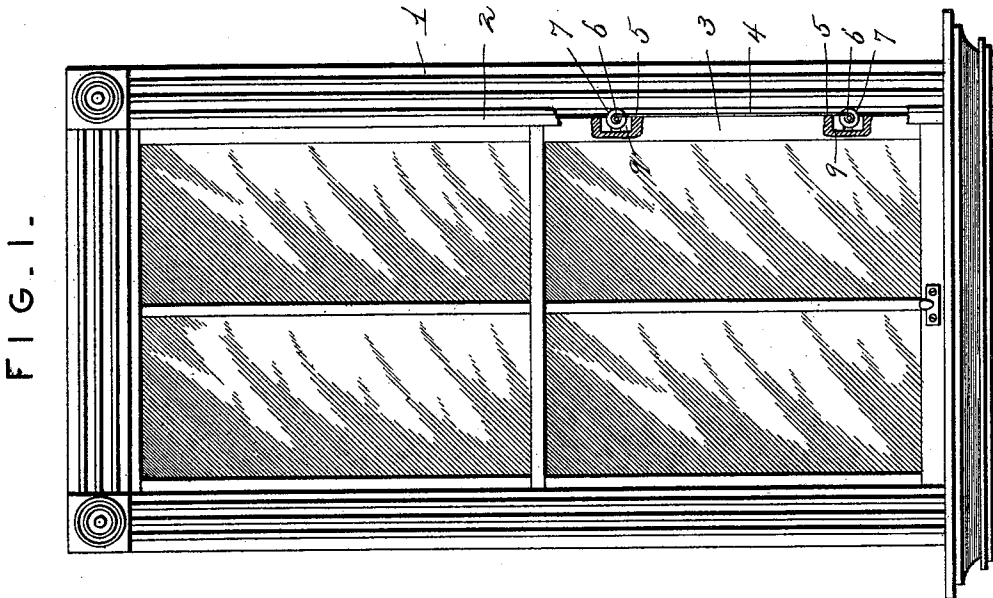
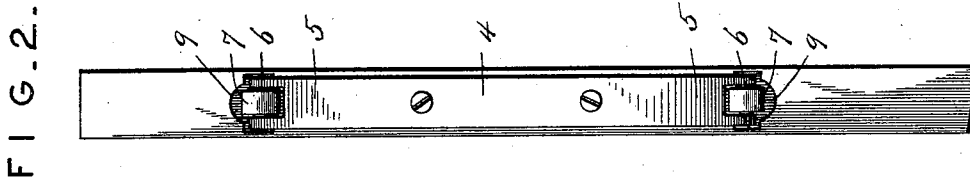
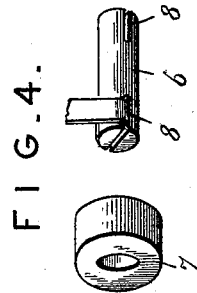
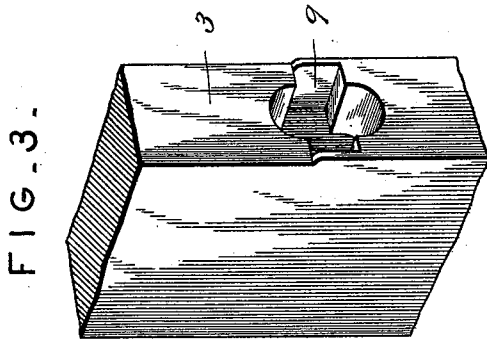


(No Model.)

J. T. GRUBB.
CAR WINDOW.

No. 583,531.

Patented June 1, 1897.



WITNESSES

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UNITED STATES PATENT OFFICE.

JACOB T. GRUBB, OF READING, PENNSYLVANIA.

CAR-WINDOW.

SPECIFICATION forming part of Letters Patent No. 583,531, dated June 1, 1897.

Application filed December 31, 1896. Serial No. 617,622. (No model.)

To all whom it may concern:

Be it known that I, JACOB T. GRUBB, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in 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.

My invention relates to windows, and its object is to provide an improved window especially adapted for railroad and other cars or in other places where the nature of the strain to which the window-frame is subjected is apt to cause the same to bind upon the window-sash.

My invention consists of certain novel features of construction and combination of parts, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a front view of a window equipped with my device, a portion of the sash being broken away to show the same. Fig. 2 is a side elevation of a sash equipped with my device. Fig. 3 is a detail perspective view of one of the pockets, and Fig. 4 is a detail perspective of my improved roller-axle.

The numeral 1 indicates a window-frame of the usual form provided with ordinary stops 2. A sash 3 is mounted to slide loosely between said stops. At each side of said sash is located a spring 4, having rebent ends 5, carrying an axle 6. A roller 7 is rotatably

mounted on said axle. This spring is formed with rebent ends forked, as shown, and these ends extend through the axle and hold the same from falling out. The axle is for this purpose provided with slots 8, adapted to receive these rebent ends. The spring is so constructed as to normally urge the axles and the rollers carried thereon outward from the sash. Pockets 9 are provided in the sash to receive the rollers and the rebent ends of the spring when the same is pressed inwardly. It is obvious that this construction provides a means whereby a window may be loosely mounted in the frame to accommodate the settling or shifting of the same.

I thus provide a simple and improved device of the character described which may be manufactured at a low cost and which will permit of the easy movement of car-windows and the like.

Having thus described the invention, what is claimed as new is—

The combination with a window-sash provided with pockets, of a spring mounted upon each side thereof having forked rebent ends, axles provided with slots within which said rebent ends are retained and rollers carried by said axles.

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

JACOB T. GRUBB.

Witnesses:

W. Z. DECK,

XAVIER SPECHLING.