

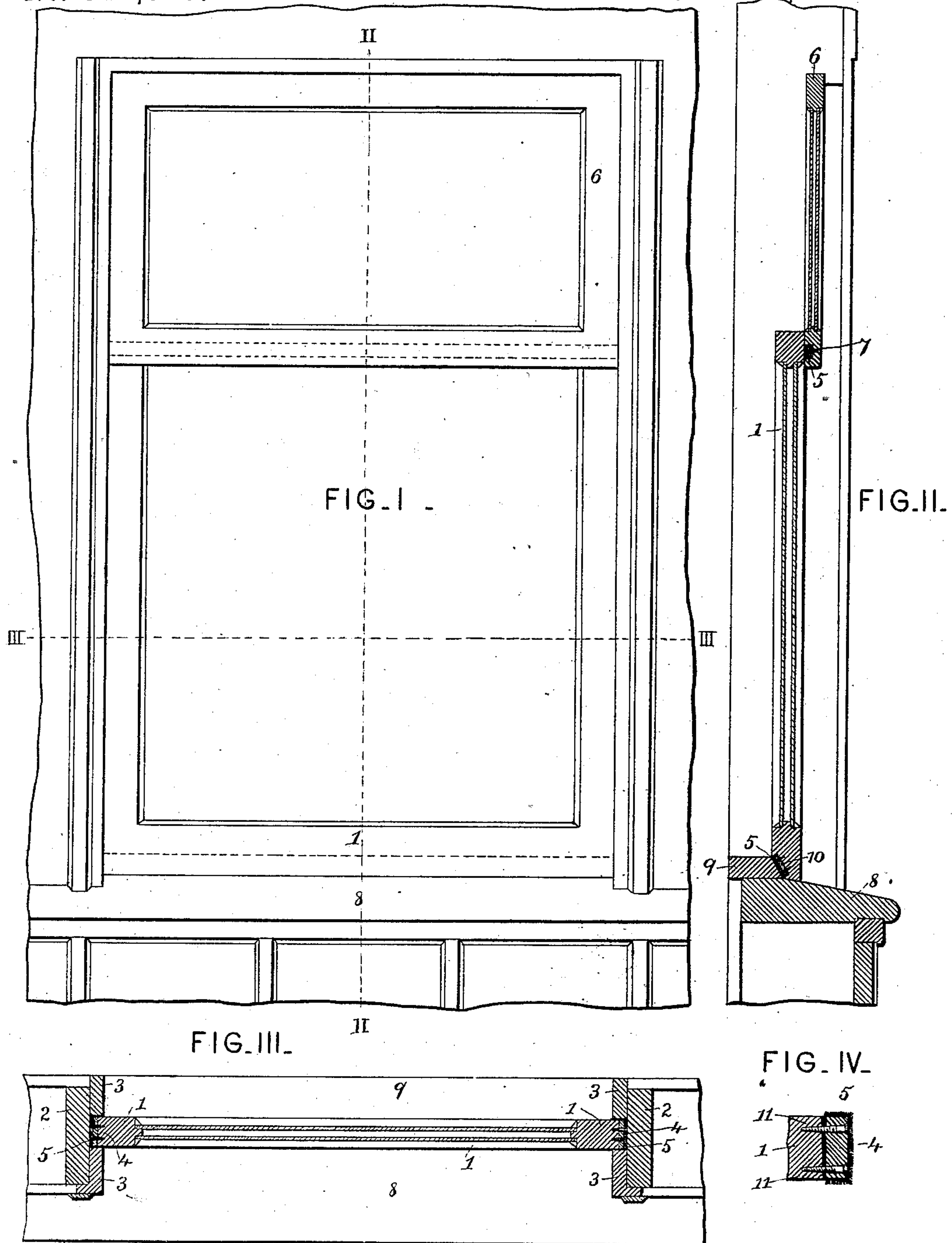
(No Model.)

W. D. MANN.

WINDOW.

No. 311,020.

Patented Jan. 20, 1885.



ATTEST-

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UNITED STATES PATENT OFFICE.

WILLIAM D. MANN, OF NEW YORK, N. Y., ASSIGNOR TO MANN'S BOUDOIR
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WINDOW.

SPECIFICATION forming part of Letters Patent No. 311,020, dated January 20, 1885.

Application filed March 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. MANN, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Windows for Railway-Cars, of which the following is a specification.

With railway-car windows as ordinarily constructed, in order to exclude air and dust so far as practicable, the sash is so tightly fitted between the faces of the frame and between the beads by which it is confined that atmospheric changes, causing the parts to swell, are liable to render the sash difficult or impossible to move; hence the sash must either be so free as to allow the passage of much air and dust under or around it in dry weather or so closely fitted as to stick and be difficult or impossible to move in damp weather. With the best fitted car-windows as ordinarily constructed leakage is liable to occur under the bottom of the sash, owing to the difficulty of making a tight joint at this point, and especially in consequence of the warping, straining, or settling to which the body of the car is unavoidably subjected in use, causing the throwing of the window-sills out of true with the sash. In order to obviate these difficulties, I apply to the edges strips of wood fitting loosely within the grooves in which the sash works, and covered with plush or like material, the pile of which forms an effectual guard to prevent the passage of air and dust, without the necessity of having the windows so tightly fitted as to cause them to move hard. To protect the top of the moving sash I employ a similar plush-covered strip within a rabbet or recess in the inner face of the lower bar of the fixed upper sash or frame, so as to bear against the outer face of the upper bar of the movable lower sash, and thus form a tight joint across the top of the window when the sash is closed. To protect the bottom of the sash I employ a beveled sill-cap, against the outer face of which the lower bar of the moving sash fits, and apply within a rabbet or recess in the inner face of said lower bar a similar plush-covered strip to fit tightly against the beveled outer face of the sill-cap.

In order that my invention may be more fully understood, I will proceed to describe it in detail, with reference to the accompanying drawings, in which—

Figure I is an external elevation of a car-window. Fig. II is a vertical section of the same on the line II II, Fig. I. Fig. III is a horizontal section thereof on the line III III, Fig. I. Fig. IV is a transverse section of a plush-covered strip on a larger scale.

The window-sash is shown at 1, sliding vertically in a frame, 2, and confined by beads or stops 3 in customary manner. The sash is made somewhat narrower than the opening which receives it, to afford room for the strips 4 of wood, completely covered with an envelope of plush, 5, or like material, the projecting pile or fiber of which forms a tight packing between the edges of the sash and the opposite faces of the frame, and between the strips 4 and the inner faces of the confining-beads 3.

It will be apparent that the elasticity and compressibility of the plush covering 5 adapts it to form an air-tight joint, so as to effectually exclude draft and dust, while the sash may move with perfect ease and freedom within its frame.

6 shows the upper fixed sash, and 7 a strip covered with plush, in the manner already described, fitted within a rabbet on the inner face of the lower bar of said upper sash, 6, so as to fit air and dust tight against the outer face of the upper bar of the sliding lower sash, 1.

A customary inclined sill is shown at 8, the inner portion of which is surmounted by a sill-cap, 9, beveled on its outer face. The inner face of the lower bar of the sash 1 is correspondingly beveled to fit the outer face of the sill-cap 9, and is recessed or rabbeted to receive a strip, 10, covered with a plush envelope, 5, as already described with reference to the other strips. By means of the lower plush-covered strip, 10, I have effectually obviated the difficulty experienced from the driving of dust beneath the window-sash, which occurs to a great extent even in the best constructed cars heretofore in use, owing to the straining of the frame, so as to throw the sill

8 out of square with the vertical studs 3 of the frame, and consequently out of true with the lower edge of the sash, which should fit upon the said sill.

5 With my invention, although the sill may be strained out of square or true to any possible extent, the packing formed by the plush-covered strip 10 between the inner face of the sash and the outer face of the sill-cap 9 is not
10 impaired.

The plush-covered strips are secured by screws 11, which may easily be withdrawn when it becomes necessary to renew the plush covering. By this means worn packing may
15 be restored to effective condition with trifling labor and cost.

I am aware that it is common to employ weather-strips of yielding material on the edges and faces of window-sash in various ways, and also
20 that a weather-strip has been made of a tube of soft material and a stiffening-bar contained therein.

My invention possesses especial advantages in the use of plush or like pile fabric, particularly in its application to car-windows, by the
25 perfect packing afforded against the entrance of dust without interfering with the movement

of the sash or causing it to work hard under variable atmospheric conditions. Especial advantage also exists in the use of this packing material by the facility afforded for frequent renewal of the packing by simply removing the strip, applying a new piece of plush around it, and restoring it to its position.

I am also aware that weather-strips have
35 been applied in rabbets and recesses, and have been employed to protect or pack inclined or beveled faces of window-sash or sash-frames in various ways.

The following is what I claim as new in my
40 invention and desire to secure by Letters Patent:

1. A packing for car-windows, consisting of plush or like pile fabric and a strip of wood or other rigid material, around which said fabric is wrapped, as herein shown and described.
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2. The combination of the sash 1, beveled sill-cap 9, and the plush-covered strip 10, inserted in a recess or rabbet, as and for the purposes herein set forth.

W. D. MANN.

Witnesses:

W. L. DANIELS,

OCTAVIUS KNIGHT.