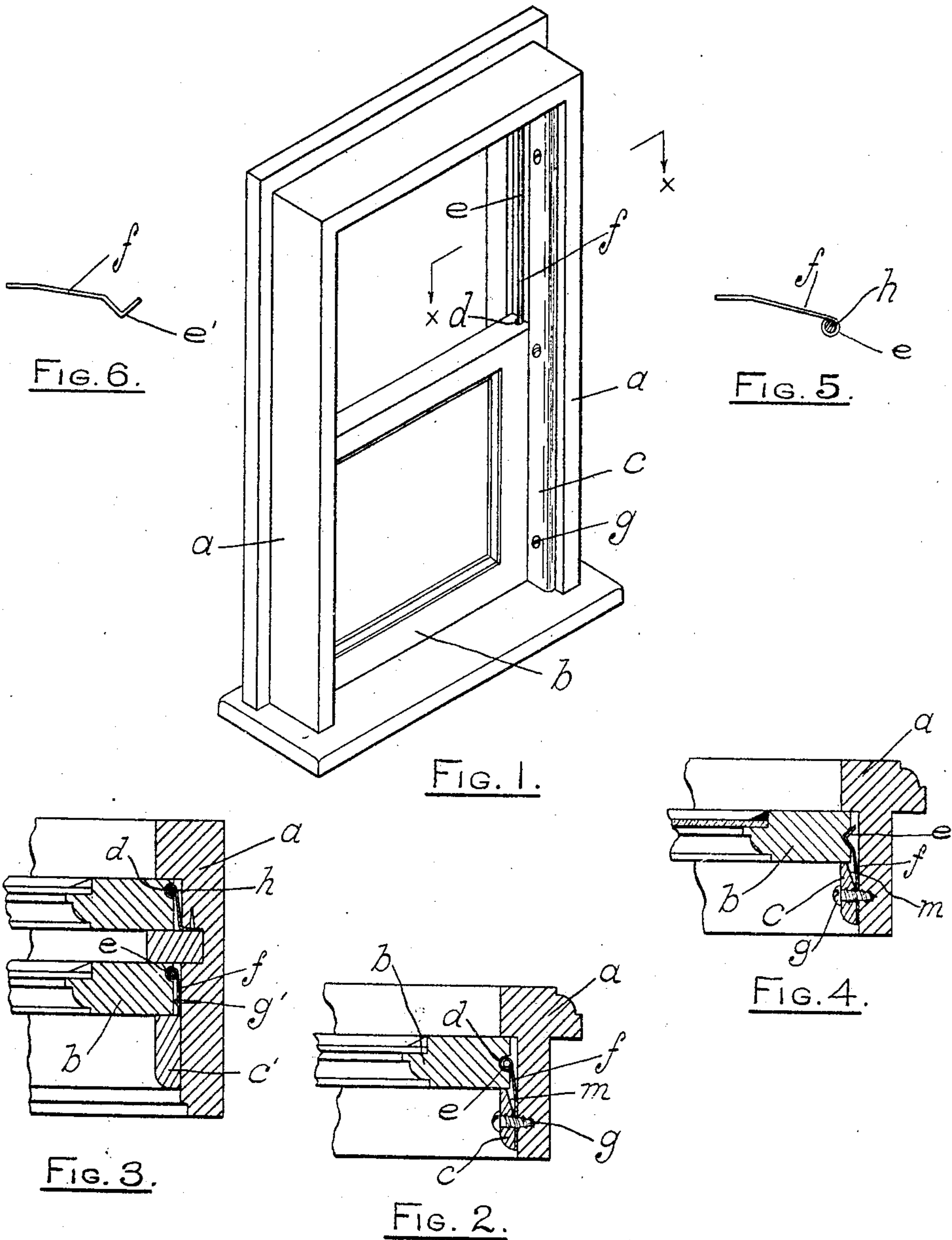


No. 805,440.

PATENTED NOV. 28, 1905.

O. A. BINGHAM.  
WINDOW.

APPLICATION FILED MAR. 11, 1905.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## WINDOW.

No. 805,440.

Specification of Letters Patent.

Patented Nov. 28, 1905.

Application filed March 11, 1905. Serial No. 249,579.

*To all whom it may concern:*

Be it known that I, OSMORE A. BINGHAM, a citizen of the United States, residing at Swanzev, in the county of Cheshire and State of New Hampshire, have invented certain new and useful Improvements in Windows, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in windows of all kinds, more particularly car-windows, and has for its purposes, primarily, means for assuring an unimpeded sliding movement of the sash, an efficient and cheap guiding means for the same, the exclusion of dust and cold air, and a structure which will not rattle.

To the above ends my invention consists in a novel attachment and its novel union with the familiar parts of a sash and window frame, as hereinafter described, and illustrated in the accompanying drawing, wherein—

Figure 1 is a perspective view of my novel invention embodied in a car-window; Fig. 2, a transverse section of the same on line  $x x$  of Fig. 1; Fig. 3, a like section of a house-window embodying my invention; Fig. 4, a similar section of a car-window equipped with a modified form of my invention; and Figs. 5 and 6 detail views of my novel strip in approved and modified forms, respectively.

Like reference-letters indicate like parts throughout the views.

In the drawings,  $a$  represents the frame,  $b$  the sash, and  $c$  the stop-casing or stop-bead, of a window. The opposite end faces of the sash are provided with vertical grooves  $d$  to receive a continuous rib, preferably a cylindrical bead  $e$  upon the margin of a flat metallic spring-strip  $f$ , fixed to the window-sash by means of screws  $g$ , traversing the stop-casing  $c$ , or in any other suitable manner. The portion of the strip  $f$  adjacent the ribbed or free margin is preferably inclined somewhat in relation to the remainder of the strip, as shown in Figs. 5 and 6, and the rib may be either a bead cylindrical in outline with or without a wire stiffening-core  $h$ , or it may be V-shaped in cross-section, as shown in Fig. 6 at  $e'$ . The cylindrical bead with a wire stiffening-core is, however, advantageous

under conditions in which the sash is likely to swell to a considerable extent, inasmuch as there is no liability of the said specific bead being crushed out of shape between the sash and the frame, and thereby impaired.

In the case of car-windows, where the sash is always narrow, it is necessary in order to secure sufficient transverse movement of the spring-strip  $f$  that the inner margin of the latter extend a distance beneath the stop casing or bead  $c$ , and to permit freedom of transverse action when so located the inner face  $m$  of the stop-casing is chamfered or beveled, as shown in Figs. 2 and 4. In virtue of the said arrangement of the spring-strip relative to the bead  $c$  and the beveled inner side of the said bead  $c$  it will be seen that ample movement of the spring-strip is permitted, and yet said strip is entirely hidden from view; also, that a common means may be employed, as shown, to connect the bead  $c$  and the strip  $f$  to the frame. It will be noted, however, that in a house-window the sash is frequently so broad as to admit the entire strip to rest outside the bead-stop  $c'$ . Therefore the latter is not chamfered, but, as shown in Fig. 3, fixed by a screw or nail  $g$  in alignment with the sash  $b$  itself.

By my invention it is possible to make the thickness of a car-window sufficiently less than the thickness of the channel in which it slides as to insure that the swelling of the parts by weather conditions cannot create undue friction of sash and frame, since the rib  $e$  alone is a firm and sufficient guide for the sash independent of the bead-strip. The rib  $e$  also prevents the rattle common to windows of the usual construction.

While only two forms of rib are herein described, I do not limit myself to any particular form of cross-section.

Having described my invention, what I claim is—

The combination with a window-frame and a sash arranged to slide in the frame and having a groove in its end face; of a stop-strip  $c$  arranged in the frame in front of the sash and having its face  $m$  adjacent to the stile of the frame cut away, a spring-strip bent transversely and having a free edge provided with a rib interposed between the



frame and the sash and disposed in the groove of the latter and also having a portion interposed between the cut-away face *m* of stop-casing *c* and the stile of the frame, and means  
5 fixedly connecting the stop-strip *c* and the said portion of the spring-strip to the said stile of the frame.

In testimony whereof I have affixed my signature in presence of two witnesses.

OSMORE A. BINGHAM.

Witnesses:

HORATIO E. BELLOWS,  
WILLIAM E. BROWN.