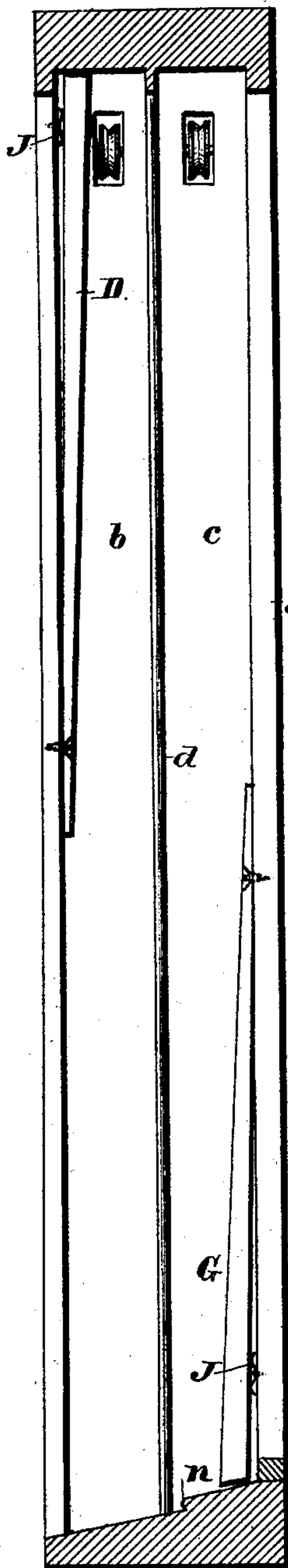


G. HARTIG.  
Window-Sash.

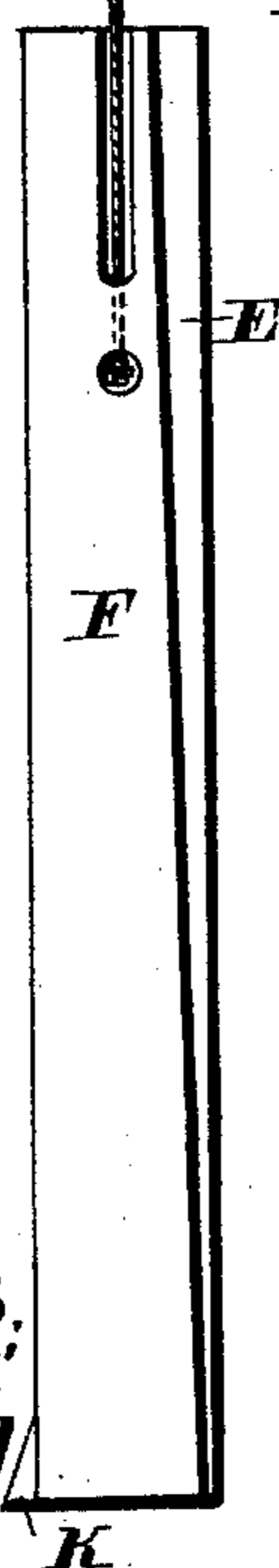
No. 223,342.

Patented Jan. 6, 1880.

*Fig. 1.*



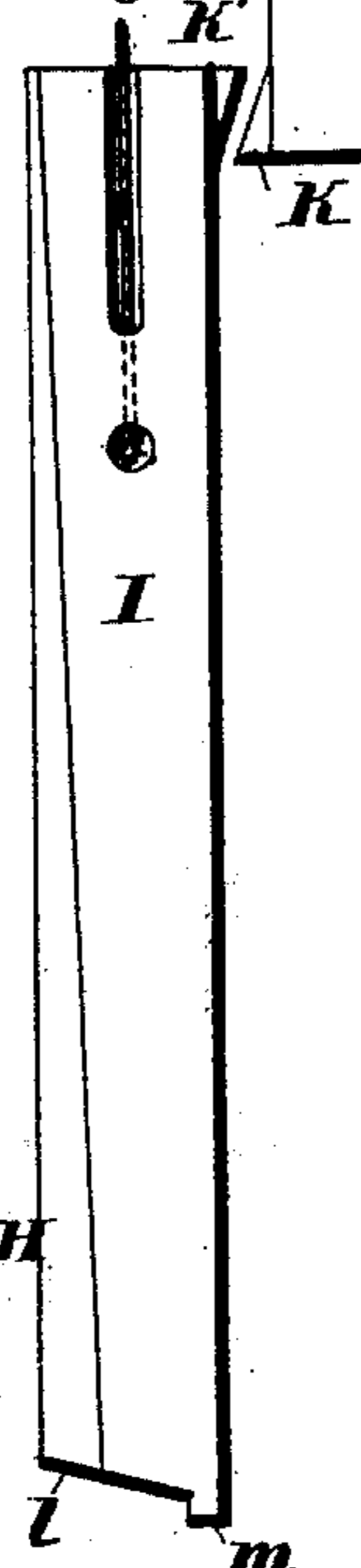
*Fig. 2.*



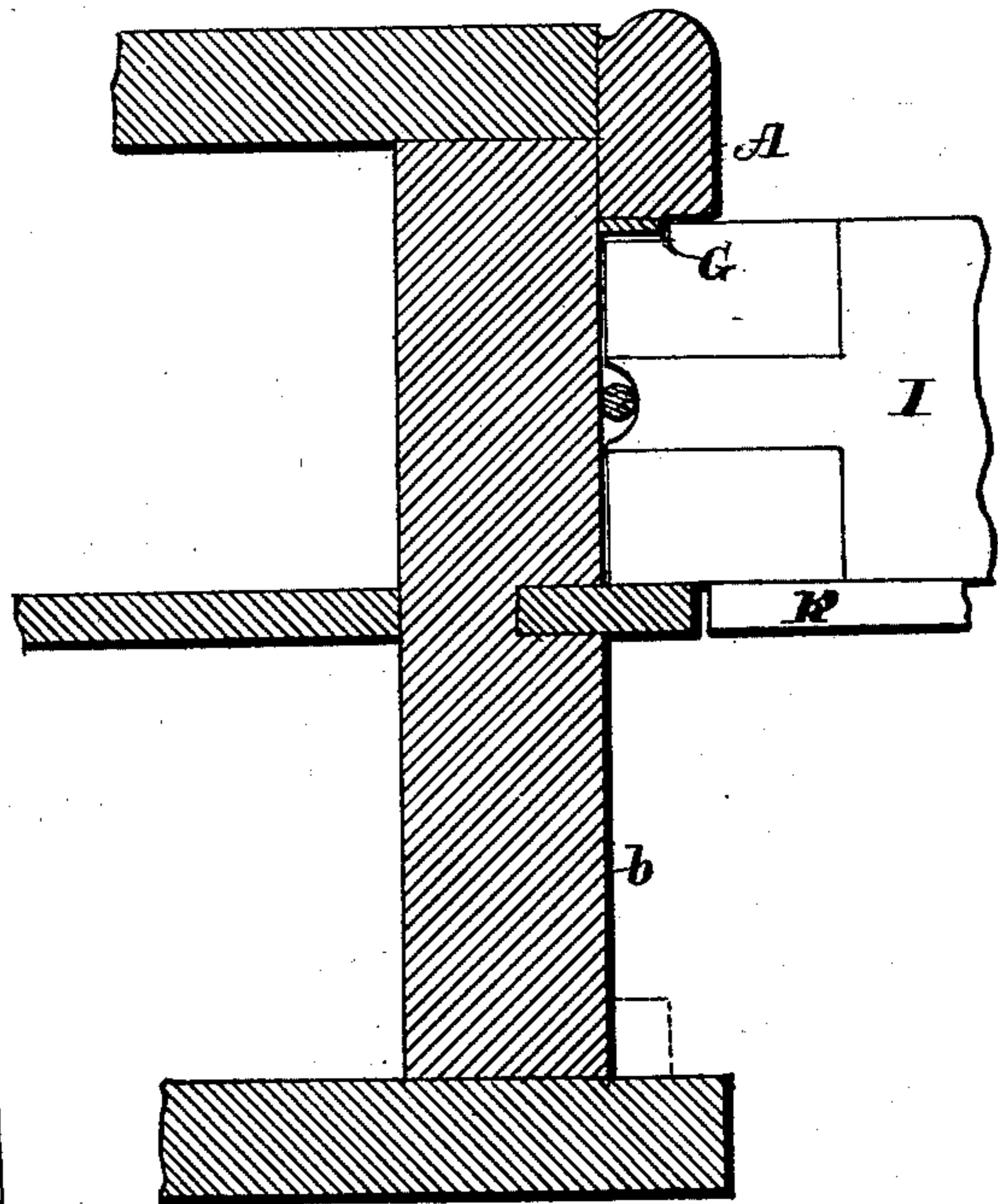
*Fig. 4.*



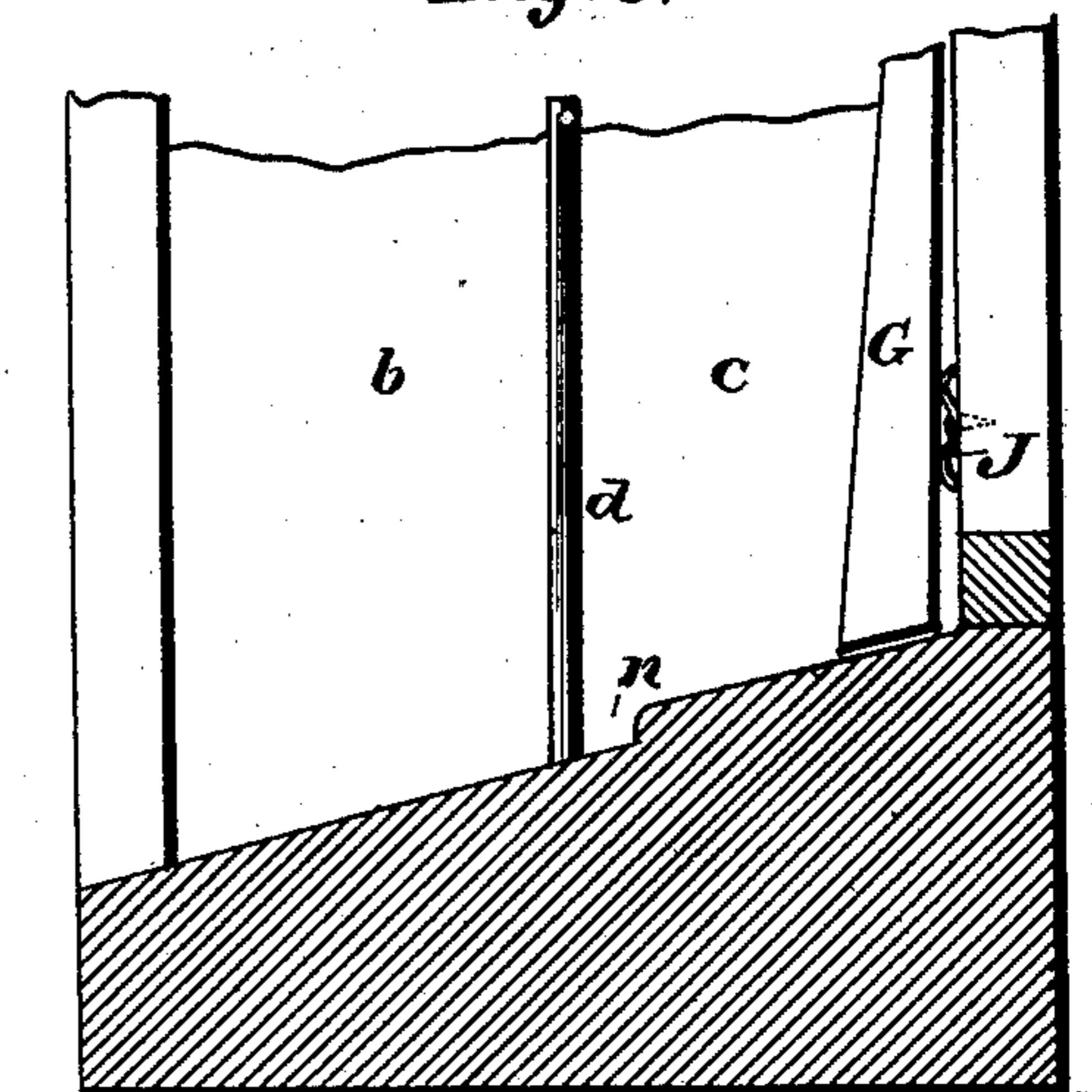
*Fig. 3.*



*Fig. 5.*



*Fig. 6.*



*Attest:*

*J. Henry Kaiser.*  
*J. A. Rutherford.*

*Inventor:*

*George Hartig.*  
*By James L. Norris.*  
*Att'y.*

# UNITED STATES PATENT OFFICE.

GEORGE HARTIG, OF BRIXTON, COUNTY OF SURREY, ENGLAND.

## WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 223,342, dated January 6, 1880.

Application filed November 26, 1879; patented in Great Britain, November 6, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE HARTIG, of Brixton, in the county of Surrey, England, have invented certain new and useful Improvements in Window-Sashes, (which invention was patented in Great Britain, November 6, 1879, No. 2,251,) of which the following is a specification.

This invention relates to an improved construction of the joints between window-sashes and their casings, its object being to prevent rattling and secure water-proof and air-tight joints between the sashes.

The invention consists—

First, in the combination, with the grooved jambs of a window-frame and the sashes sliding in said grooves and having their meeting-rails provided with beveled meeting faces and their vertical edges provided with rabbets decreasing in width or tapering toward the meeting-rails of said sashes, of tapering battens arranged against the lower ends of the inner walls of the lower sash-grooves, and others against the upper ends of the outer walls of the upper sash-grooves, and each having its smaller end firmly secured to the adjacent wall, and suitable springs arranged between the end walls and the wider ends of said battens. By having the smaller ends of the battens firmly secured said battens are prevented from moving longitudinally, while the springs keep the larger ends pressed snugly against the sashes. There is no need to press the narrower ends of the battens against the sashes, as the latter are, by the action of the inclined faces of the meeting-rails, forced against the battens.

Second, the combination, with the grooved lower sash-jamb and the rabbeted sash sliding in the grooves and having its lower edge beveled and provided with a downwardly-projecting lip or extension of its outer portion, and a sloping sill corresponding to the bevel of the lower edge of the sash and having a longitudinal shoulder to fit behind the lip of the sash, of the tapering battens arranged against the inner walls of said grooves and having their upper and narrower ends secured firmly thereto, and the springs interposed between said walls and the wider lower ends of the battens. The lip of the sash, fitting over

the shoulder of the sill, prevents rain and snow from beating under the sash, and the springs behind the battens cause the lower end of the sash to be always forced outward, so that the lips will slip beyond the shoulder without striking and abrading its edge.

In the accompanying drawings, Figure 1 is a vertical section of a window-casing, showing an inner view of the jamb. Fig. 2 is a vertical edge view of the upper sash, and Fig. 3 is a similar view of the lower sash. Fig. 4 is a detached perspective view of one of the tapering battens. Fig. 5 is a horizontal section through the middle of one side of a window-frame. Fig. 6 is an enlarged inner view of the lower portion of a jamb, with a tapering batten in position and resting against a spring.

The letter A designates the jamb, and *b* and *c* the grooves for the upper and lower sashes, respectively, these grooves being separated by the parting-bead *d*.

At the upper end and against the outer wall of the upper sash-groove, *b*, is secured a downwardly-tapering batten, D, which fits snugly into a similarly-shaped rabbet, E, in the edge of the upper sash, F, Fig. 2, when the latter is in position in its groove.

In the lower end and against the inner wall of the lower sash-groove, *c*, is arranged an upwardly-tapering batten, G, which fits snugly into a similarly-shaped rabbet, H, in the edge of the lower sash, I, when in position. The smaller end of each batten is firmly secured to the adjacent wall by a screw or other suitable means, to prevent longitudinal displacement of the batten.

Both joints of the frame are provided with tapering battens, and both edges of each sash are rabbeted, as described, and behind the wider end portion of each batten, and between it and the groove-wall, I arrange a spring, J, which keeps it firmly pressed against the sash. Along the inner face of the meeting-rail of the upper sash is secured a beveled strip, K, the face of which inclines downwardly from the sash; and along the outer face of the meeting-rail of the lower sash is secured a similar beveled strip, K', inclining in the opposite direction. The inclined faces of these strips cause the meeting ends of the sashes to be forced against the battens, so

that there is no necessity of springs behind the small ends of said battens, and they are therefore permitted to be firmly secured.

The lower edge of the lower sash is beveled, as shown at *l*, Fig. 3, and is provided with a downwardly-projecting lip or flange, *m*, which, when the sash is drawn down to its lowest portion, takes in front of and fits against a shoulder, *n*, formed on the bottom rail or sill of the frame.

Now, when the two sashes are in their respective grooves and the upper pushed to its highest and the lower to its lowest position, the tapering battens, fitting in the rabbets, act as wedges to force the sashes toward each other and snugly against the parting-bead *d*, thus forming a very close jamb-joint, while at the same time the faces of the beveled strips *K* and *K'*, coming together, also exert a wedging action upon each other, and form a snug joint between the two sashes. The close joints thus formed absolutely prevent vibration and consequent rattling of the sashes, while the lip *m*, taking over the shoulder *n*, prevents the passage of rain under the lower sash.

The springs *J*, as will be readily observed, press the tapering battens toward the sashes, and compensate for wear of the faces of said battens.

The battens, if desired, may be faced with felt or a similar packing.

The sashes and frame may be equipped with cords, weights, and pulleys in the ordinary manner.

I am aware that tapering battens have been

arranged to fit into rabbets in the edges of sashes, and that these battens have been faced with rubber and provided with springs; and I do not claim such construction and arrangement, broadly.

What I claim is—

1. The combination, with the grooved jambs and the rabbeted sashes sliding in said grooves, and having their meeting-rails provided with beveled meeting-faces, of the tapering battens having their smaller ends secured to the walls of said grooves, and the springs interposed between said walls and the larger or wider ends of said battens, substantially as described, and for the purpose set forth.

2. The combination, with the grooved lower sash-jamb and the rabbeted sash sliding in the grooves, and having its lower end beveled and provided with the downwardly-projecting lip, and a sloping sill corresponding to the bevel of the lower edge of the sash and having the longitudinal shoulder to fit behind the lip of the sash, of the tapering battens arranged against the inner walls of said grooves and having their upper ends secured thereto, and the springs interposed between said walls and the wider lower ends of said battens, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

GEORGE HARTIG.

Witnesses:

G. L. SGOUTZ,  
JAMES KAHN.