(No Model.)

C. J. HOLMES.

WINDOW SASH.

No. 318,736. Patented May 26, 1885.

Fig. 1

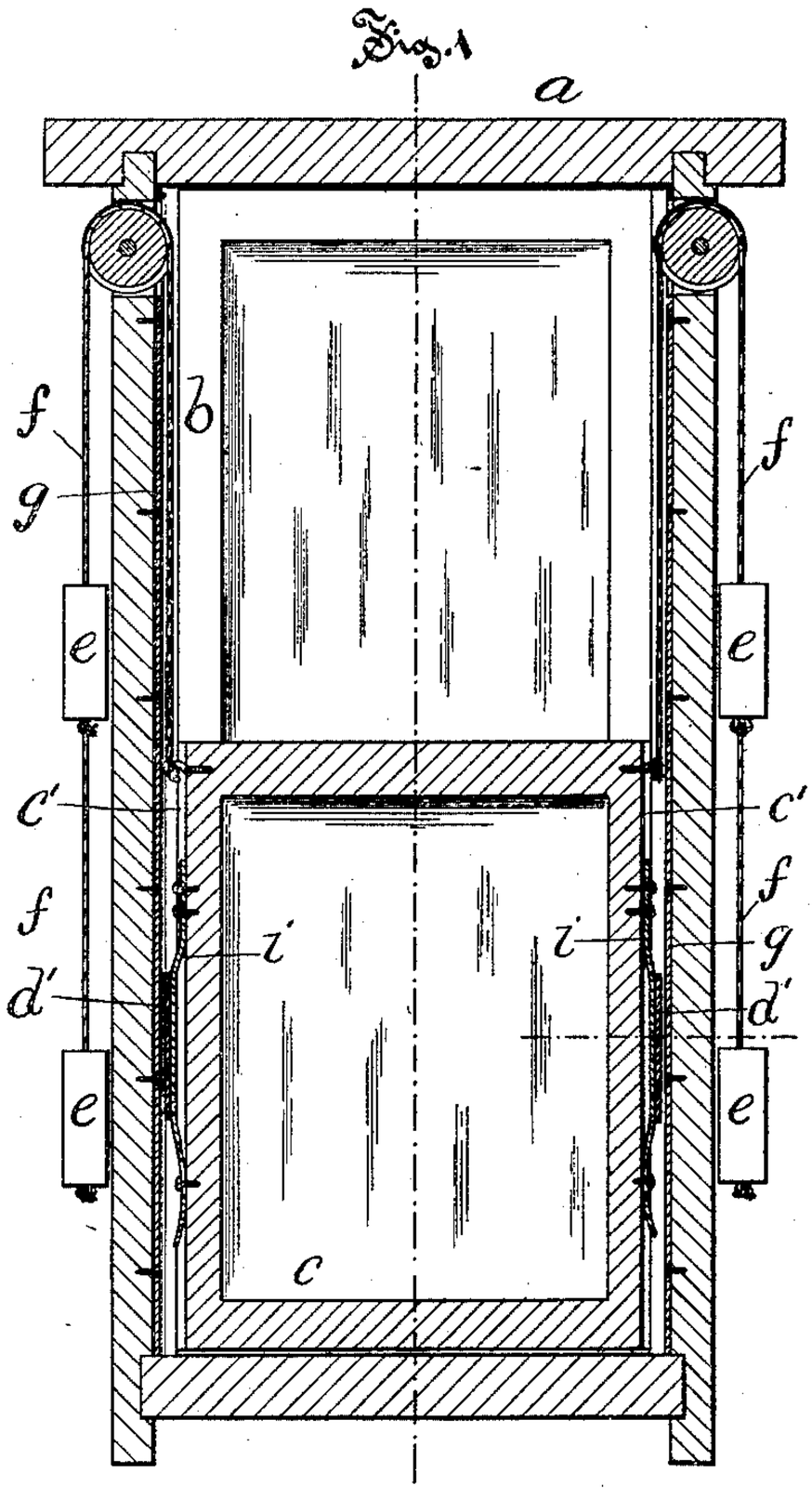


Fig. 2

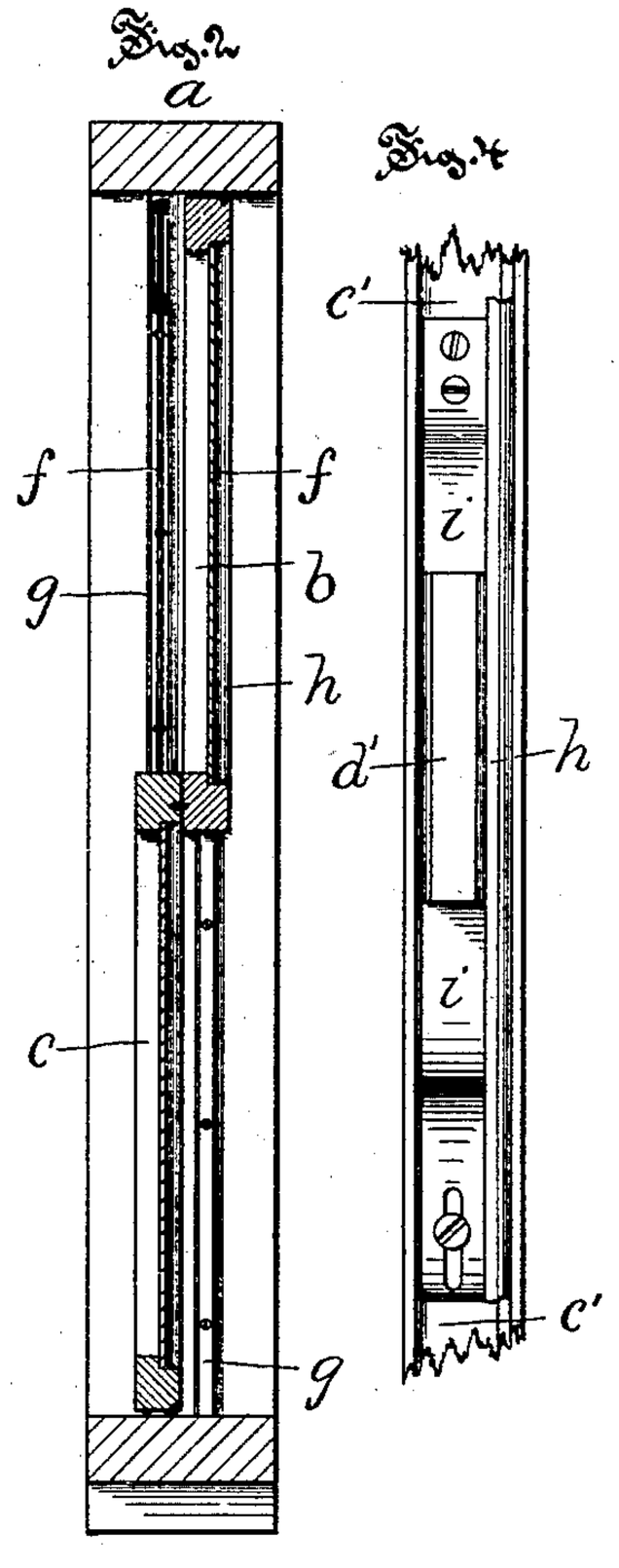
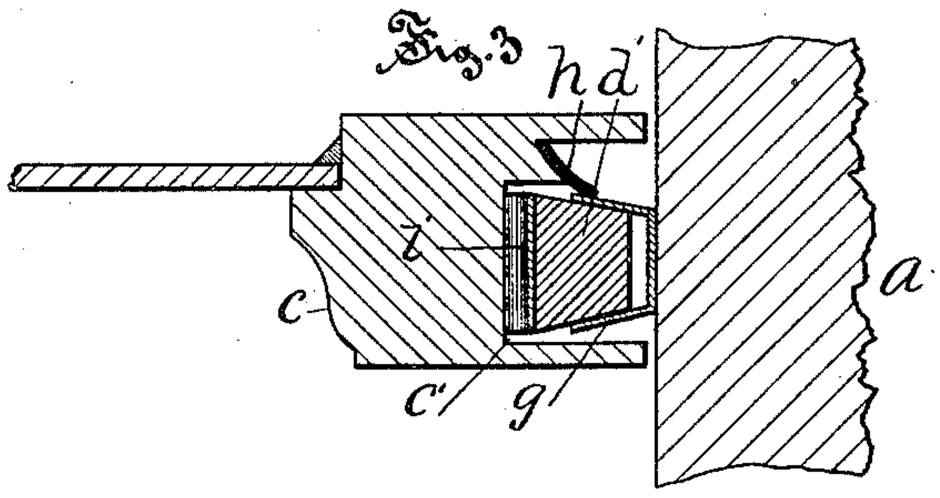


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

CHESTER J. HOLMES, OF STAFFORD SPRINGS, CONNECTICUT.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 318,736, dated May 26, 1885.

Application filed October 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHESTER J. HOLMES, of Stafford Springs, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Window-Sashes, of which the following is a specification, reference being had to the accompanying drawings and the letters of reference marked thereon, where—

Figure 1 is a view in vertical section through a window-frame, sash, and connected parts on a plane passing through the center of the guides. Fig. 2 is a view in vertical cross-section through the frame and sash, looking toward the side of the frame, showing the guide in plan view. Fig. 3 is a detail cross-sectional view of part of the sash, the guide, and the slide, to show construction. Fig. 4 is a detail face view of one of the guides in its groove.

The object of my invention is to provide a window-sash that shall be free to slide up and down in the usual manner in the frame, and that shall be so constructed and held as to be substantially air-tight under extreme changes of weather, and shall also prevent the entrance of dust and stop all rattle.

My improvements to this end consist in combining with the window-frame a trough-shaped metallic guide and placing in a groove along the edge of the sash a slide that is borne upon a spring which presses outward against the track or guide.

In the accompanying drawings, the letter *a* denotes a window-frame of ordinary construction; *b*, the upper sash, and *c* the lower sash, each balanced by weights *e*, attached to the sash-cords *f*, the latter being fastened to the sash in the ordinary manner. Each sash is provided with ways or guides *g*, secured to the jamb of the window upon the opposite vertical sides, and the description of my invention as applied to one sash applies to both. The sash, as *c*, has longitudinal grooves *c'* in the edges that slide nearest the window-jambs, and in each of these grooves is secured a spring, *i*, which spring bears a slide, *d'*, that is made of metal, rawhide, or other suitable material, and of a width that causes it to fit closely in the hollow of the trough-shaped metallic guide *g*. Each of these guides *g* flares slightly in cross-section, and the slides are tapered so as to fit in the trough, but strike the bottom of the trough, and this construction prevents the parts from becoming loose by wear. These guides are secured to the window-jamb upon each side of the sash with the open face outward, and on one side of each groove in the sash a strip, *h*, of elastic material, as rubber, is fastened and pressed closely against the guide. I prefer to fasten each slide *d'* upon the center of a leaf-spring, *i*, that is secured to the bottom of the groove by its opposite ends in such manner that one end of the spring is left free to slide, so that the spring, which in its normal shape is bent outward at the center, may operate. The function of the spring-actuated slide is to thrust outward, so as to prevent the window from rattling sidewise, and these parts (the guide and slide) are what support the sash in its travel. The elastic strip or packing along the side of the groove and the side of the guide not only serves to exclude dust and air, but also to prevent in some degree the rattling of the window, although its chief use is to exclude dust. In case where the sash and glazing are of only moderate weight the friction caused by the outward thrust of the slide against the trough and the frictional grasp of the packing against the side of the trough will serve to hold the window in any desired part of its play without the need of using balancing-weights. A special advantage resides in the use of a metallic guide in this combination, for the reason that no changes of the weather can affect the fit of the parts so that they will stick or jam. The sash, having been once placed in easy running condition, will keep in serviceable shape for a long period.

I claim as my invention—

1. In combination with a window sash or frame, a metallic trough-shaped guide fast to the frame, a sash having lateral grooves, each groove bearing a spring-seated slide, and within the groove an elastic cushion between the side of the groove and the side of the guide, all substantially as described.

2. In combination, a window-frame having a trough-shaped metallic guide, and a sliding sash with lateral grooves, and bearing a spring-seated slide pressed into the hollow of the

guide by means of a spring, all substantially as described.

3. In combination with a window-frame and a sliding sash, a metallic trough-shaped guide fast to the frame, and a slide borne on the sash and moving in the hollow of the guide, all substantially as described.

4. In combination with a window-sash having a grooved sliding face, a frame bearing a trough-shaped guide entering the groove, and an elastic packing, also located in the groove and between the side of the groove and the guide, all substantially as described.

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Witnesses:
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