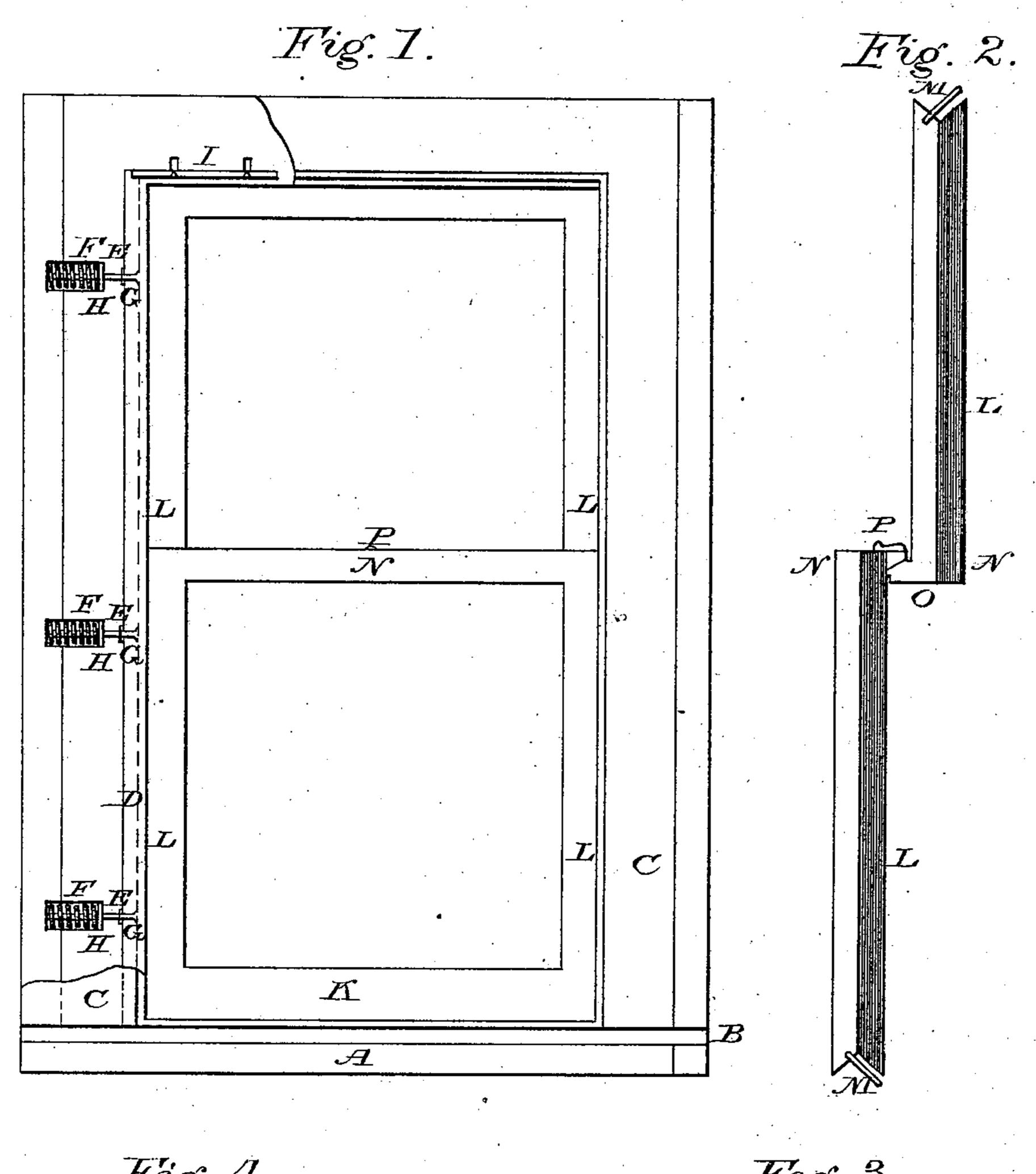
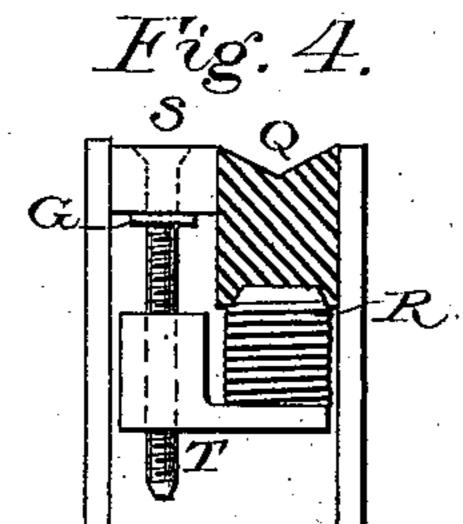
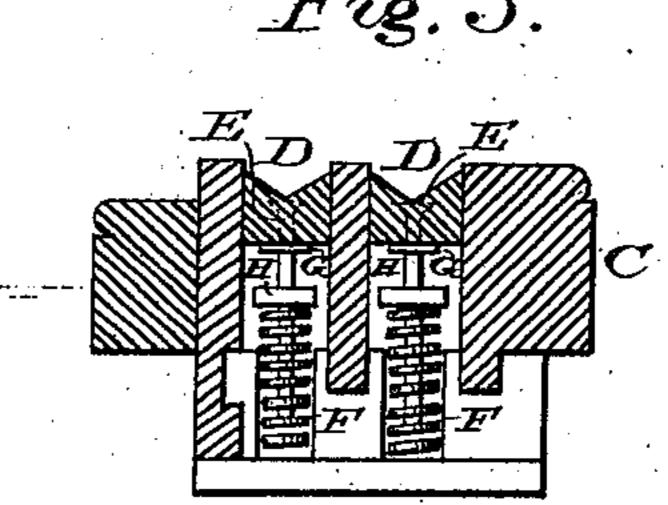
D. E. COOKE. Window.

No. 209,863.

Patented Nov. 12, 1878.







Wilnesses:

Hukugham 6.26 Beafford. Invertor.
Daniel Everett Cooke,
by left. M. J. Amaed att.

## UNITED STATES PATENT OFFICE.

DANIEL E. COOKE, OF BRANTFORD, ONTARIO, CANADA, ASSIGNOR, BY MESNE ASSIGNMENT, OF ONE-HALF HIS RIGHT TO ROBERT GRIGOR.

## IMPROVEMENT IN WINDOWS.

Specification forming part of Letters Patent No. 209,863, dated November 12, 1878; application filed June 11, 1878.

To all whom it may concern:

Be it known that I, Daniel Everett Cooke, of the city of Brantford, in the Province of Ontario and Dominion of Canada, carpenter, have invented certain new and useful Improvements in Window Frames and Sash, of which the following is a specification, reference being had to the accompanying drawing, and to the letters of reference thereon.

My invention relates to the manner of fitting the sash to the window-frame, which is done by slides of hard wood set in the sides of the frame, and having V-grooves formed in them, the sides of the sash being made to fit in the slides. On one side of the frame the slides are stationary, but on the other side are made yielding by means of adjustable spiral springs set in the frame. The springs are compressed by means of screws and nuts, the required pressure being thereby put on the sash, which is thus held as desired. Ordinary sash-pulleys are placed at the upper ends of the stationary slides, so that counter-weights may be used where heavy sash or doors are employed.

In the accompanying drawing, Figure 1 is a front view of the window frame and sash. Fig. 2 is an edge view of the sashes. Fig. 3 is a section, showing slides, screws, and springs for double sash. Fig. 4 is a similar section, showing slide, screw, and spring for single sash.

A is the sill of the window-frame, in which a recess, B, is formed to receive the window-stool. C is the casing, part of which is shown removed in the drawing. D D are the V-shaped slides in which the sash is moved. On one side of the frame they are stationary, and at their upper ends sash-pulleys may be set when required. On the other side of frame the slides are adjustable by means of spiral springs F, which are set up by screws E. Pins G pass through the screws/E behind the slide, which pins, with the heads of the screws,

keep the screws in the slide. The springs are compressed under and by the nuts H, placed on the screws E.

The tension of the spiral springs is regulated by means of the screws and nuts. When the springs are by this means adjusted to their condition of greatest elasticity, the adjustable slide can be pushed in by hand, and the sash moved in with it sufficiently far to be freed from the stationary V-shaped slide at the opposite side, whereupon the sash can be moved from the frame.

In order to remove the slides, and thereby reach the springs, strips I, of the same width as the slides, are inserted in the under side of the top of the frame, which strips, when removed, allow the slides to be moved inward and from the frame. The strips I fit against shoulders formed on the slides, which slides, when the strips are in place, are limited in their forward movement.

K is the sash, the sides of which are shaped to fit the V-shaped slides.

In Fig. 4 the same elements of spring, screw, pin, and nut are employed as in Fig. 3, their location only being changed.

The feature of the india-rubber strip shown in Fig. 2 forms no part of my present application, but may constitute the subject of one to be hereafter filed.

I claim as my invention and wish to secure by Letters Patent of the United States—

The sash-frame K, having V-shaped sides, combined with the window-frame, having on one side stationary V-shaped slides, and on the other the adjustable V-shaped slides D, springs F, screws E, pins G, and nuts H, all substantially as set forth.

D. E. COOKE.

In presence of—
PETER PURVES,

Notary Public, Ontario.
WM. GREEN.