

(No Model.)

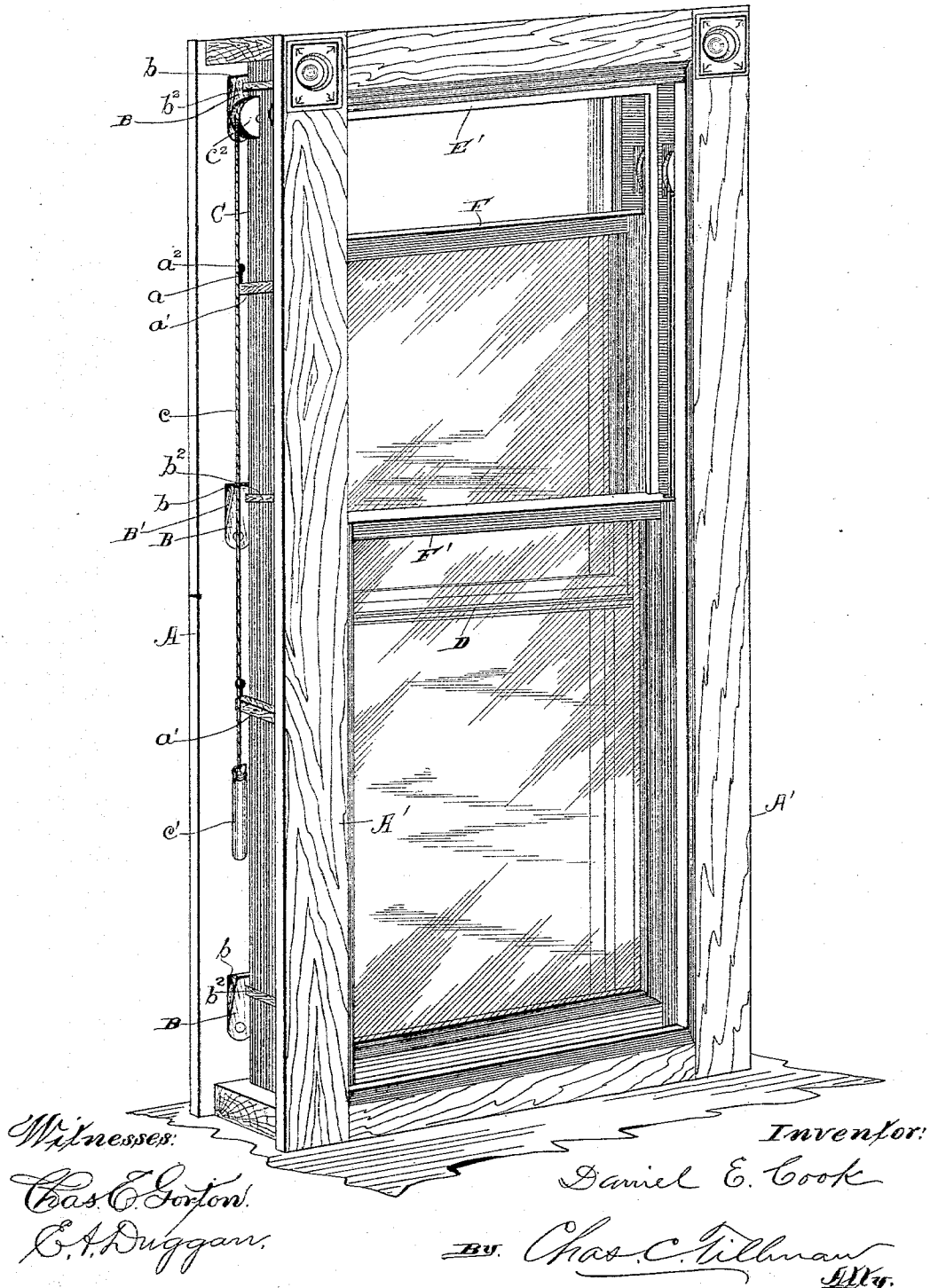
2 Sheets—Sheet 1.

D. E. COOK.
WINDOW FRAME AND SASH.

No. 531,675.

Patented Jan. 1, 1895.

Fig. 1.



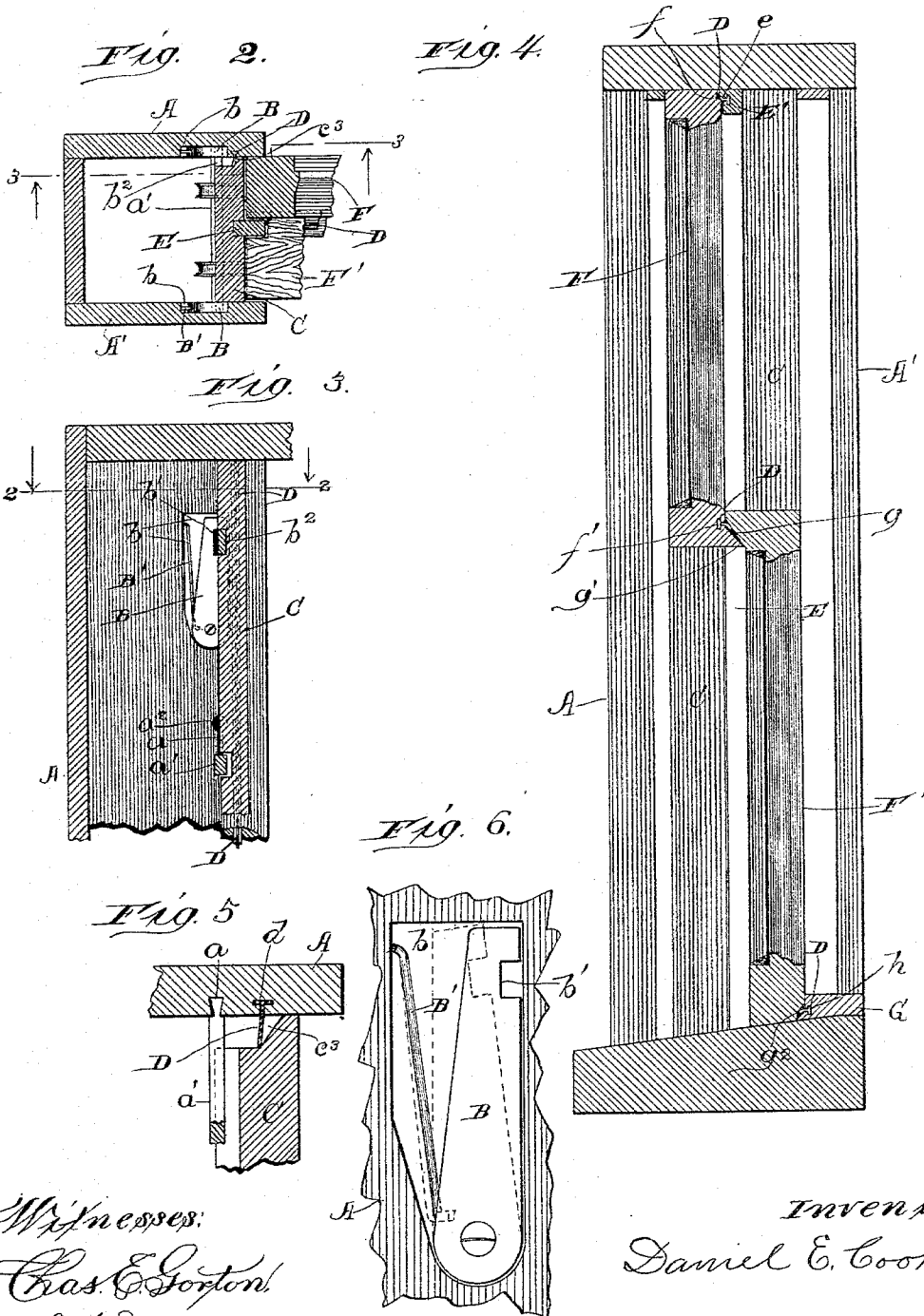
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Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

DANIEL E. COOK, OF CHICAGO, ILLINOIS.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 531,675, dated January 1, 1895.

Application filed March 15, 1894. Serial No. 503,709. (No model.)

To all whom it may concern:

Be it known, that I, DANIEL E. COOK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window Frames and Sashes, of which the following is a specification.

This invention relates to improvements in window-frames and sashes, and consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a window-frame for the reception and operation of the sashes, which shall be simple and inexpensive in construction, strong and durable, yet effective in operation; second, such a frame, in which its parts are so adjusted with respect to the sashes, that it will allow of the free vertical movement thereof, yet will prevent them from rattling or becoming loose, within the frame; and, third, a frame and sash, which are so combined together and constructed, as to form a very closely fitting structure, thus preventing the admission of cold-air, smoke, soot, or dust.

Another object of my invention is to provide a frame which will automatically adjust itself or its parts to the sashes under the varying conditions or action of the atmosphere on the wood of which the frame and sash is made.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1, is a perspective view of a window-casing embodying my improvements, and showing the sashes in place therein, one of them being partly lowered. Fig. 2, is a cross or plan sectional view of a portion of the frame or casing and a part of the sashes, taken on line 2, 2, of Fig. 3. Fig. 3, is a vertical sectional view of a part of the frame, taken on line 3, 3, of Fig. 2. Fig. 4, is a central vertical sectional view of the frame and sashes. Fig. 5, is a detail sectional view of a part of the frame and its movable jamb-piece; and Fig. 6, is an enlarged detail view of a portion of one of the sides of the frame, show-

ing the spring-actuated adjusting piece for the jamb located therein.

Similar letters refer to like parts throughout the different views of the drawings.

A, A', represent the outer and inner side-pieces of the frame or casing, which are provided at suitable points on their inner surfaces with slots *a*, which are of dove-tail shape in cross-section, as is clearly shown in Fig. 5, and are for the reception and retention of the brace-pieces *a'*, which unite and secure the side-pieces A, and A', together. The upper part of each of the slots *a*, are enlarged as at *a*², in order to admit of the dove-tail shaped ends of the pieces *a'*, which ends are made to conform in shape and size with the said slots. The inner surface of the pieces A, and A', are also provided at proper points near their inner edges with recesses or mortises *b*, within each of which is located a movable-piece B, which is pivotally secured at one end to its respective side-piece, and is formed at its other portion with a recess *b'*, for the reception of a transverse cleat *b*², secured to the surface of the jamb C, which is made of suitable dimensions to fit snugly between the side pieces A, and A', and extends from the top to the bottom thereof. The upper portions of the jamb-pieces C, are provided with openings, through which passes a cord *c*, having on its portion within the box of the frame, a weight *c'*, for counter-balancing the sashes. These cords are passed over pulleys *c*², and operate in the usual manner. Each of the side-pieces A, A', are provided on their inner surfaces near their edges adjacent to the sashes with a longitudinal groove *d*, which is preferably formed of "T"-shape in cross-section; within which fits a correspondingly shaped weather-strip D, which is made of rubber or any other suitable flexible material.

As is shown in Figs. 2, and 5, the weather-strip D, is located between the inner edges of the side-pieces A, and the inner parts of the mortises or recesses *b*, in such a manner that its stem will extend inwardly and contact with the movable jamb C, which is provided with a beveled rabbet *c*³, on its edge adjacent to the side-pieces A. The inner surface of the jamb-pieces C, are provided with vertical dividing rails or bars E, which, together with the edges of the sides A, and A', of the frame,

form guide-ways or tracks for the sashes F, and F'. At the top of the frame is provided a dividing-rail E', which is provided on its outer surface with a slot or groove e, of "T"-shape in cross-section, within which is fitted a "T"-shape weather-strip D, the stem of which extends outward and impinges with the upper part of the sash F, which is formed with a beveled rabbet f, on its inner upper part. The lower horizontal part of the sash F, is formed or provided with a groove f', of "T"-shape in cross-section, within which is fitted a similarly shaped weather-strip D, the stem of which impinges with the meeting-rail or upper horizontal part of the sash F', which is provided with a rearward beveled extension g, which over-laps, when the sashes are normally located, an inwardly beveled extension g', on the meeting-rail or lower horizontal part of the sash F.

The sill G, of the frame is provided with a longitudinal groove h, of "T"-shape in cross-section within which is fitted a weather-strip D, of like form, the stem of which extends outwardly and impinges against the lower horizontal part of the sash F', which is provided with a beveled rabbet g'.

From the foregoing it will be seen and understood that while the jamb-pieces C, fit snugly between the pieces A, and A', of the frame, yet they are movably located therein, and will by reason of the spring-actuated pieces B, which are held normally in position by means of the springs B', be adjusted to the sashes, and that the weather-strips D, of the pieces A, A', will prevent air or dust entering between them and the jamb-pieces. It is well known that in damp or rainy weather, the sashes will become bound on account of their enlargement, by reason of the absorption of moisture and will prevent them being moved. By employing my movable jamb-pieces this difficulty is avoided. It is also apparent that by using the "T"-shaped grooves for the reception of the weather-strips, that they will be more securely retained in position and will

effect a more perfect joint by reason of the beveled rabbets of the structure.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a window structure the combination of the parallel side-pieces A, and A', having in their inner surfaces the dove-tail slots a, and mortises b, with the connecting pieces a', secured in the slots a, and the spring-actuated pieces B, located in the mortises b, and adapted to engage the cleats b², the movable jambs C, provided with the cleats b², and having at their upper ends openings and pulleys for the weight cords, the sashes F, and F', having "T"-shaped grooves provided with weather strips of a like form and beveled rabbets for the reception of the stems of said strips, all constructed, arranged, and operating substantially as and for the purpose set forth.

2. In a window structure the combination of the parallel side-pieces A, and A', the former having the longitudinal "T"-shaped grooves d, provided with "T"-shaped weather strips D, and both having a series of dove-tail slots a, and mortises b, with the connecting pieces a', secured in the slots a, and the pieces B, pivotally secured in the mortises b, and provided with springs B', to actuate them, the movable jambs C, having the cleats b², to engage the pieces B, and provided with the longitudinal and beveled rabbets c², for the reception of the stems of the strips D, and having at their upper parts openings and pulleys for the weight cords and the sashes F, and F', having "T"-shaped grooves provided with weather strips of a like form and beveled rabbets for the reception of the stems of said strips, all constructed, arranged, and operating substantially as and for the purpose set forth.

DANIEL E. COOK.

Witnesses:

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