No. 652,273. Patented June 26, 1900.

B. W. JONES.

WINDOW SASH AND FRAME.

(Application filed Apr. 16, 1898.)

(No Model.)

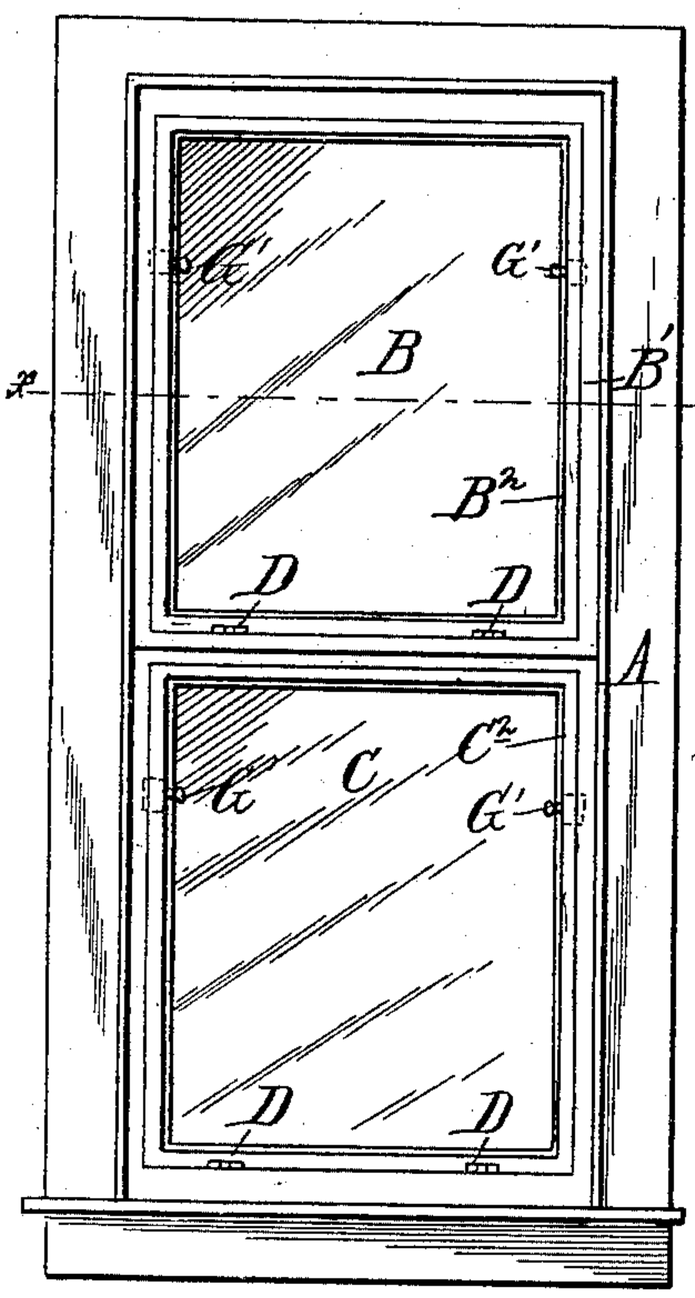

Fig. 1.

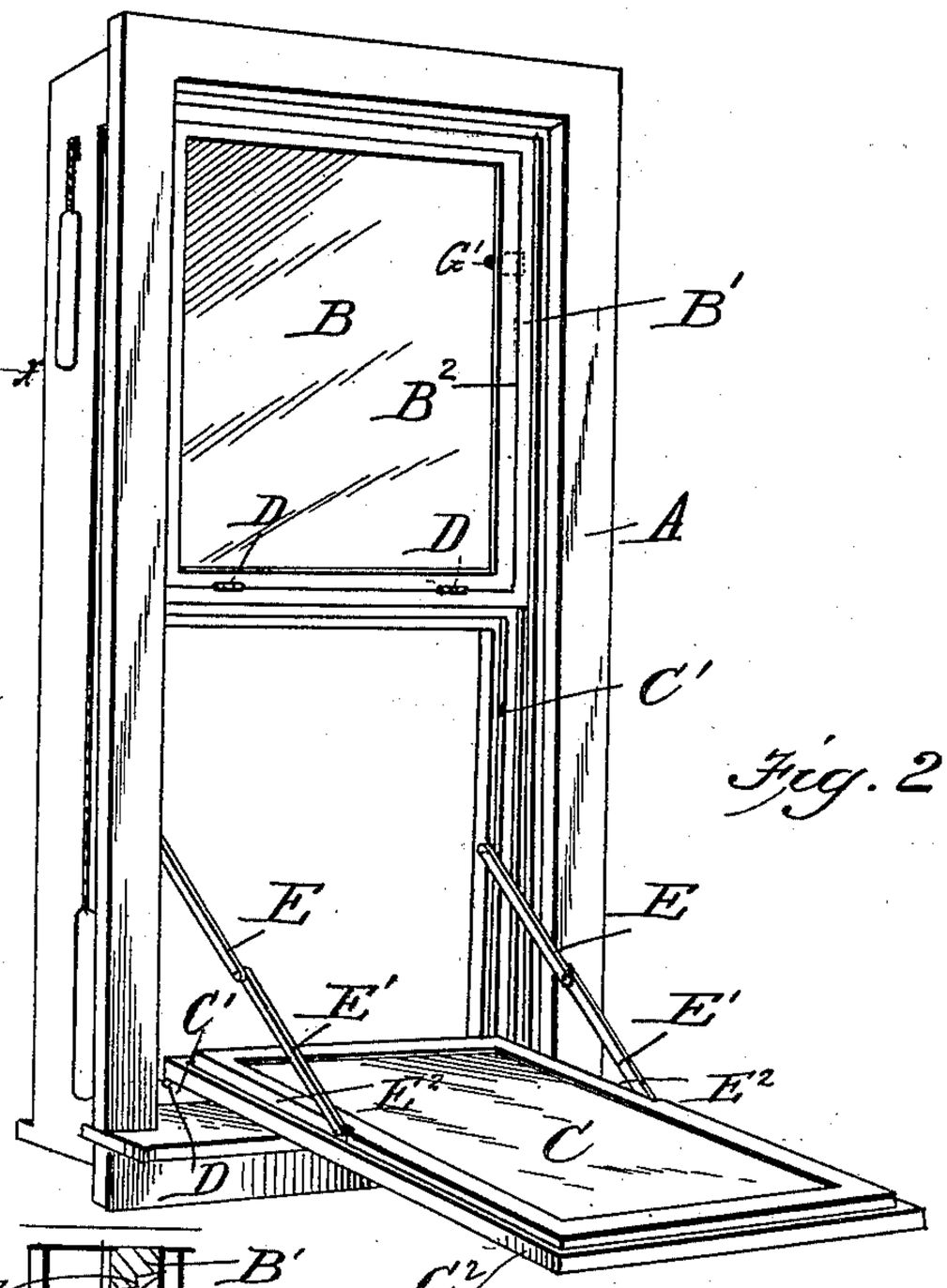

Fig. 2.

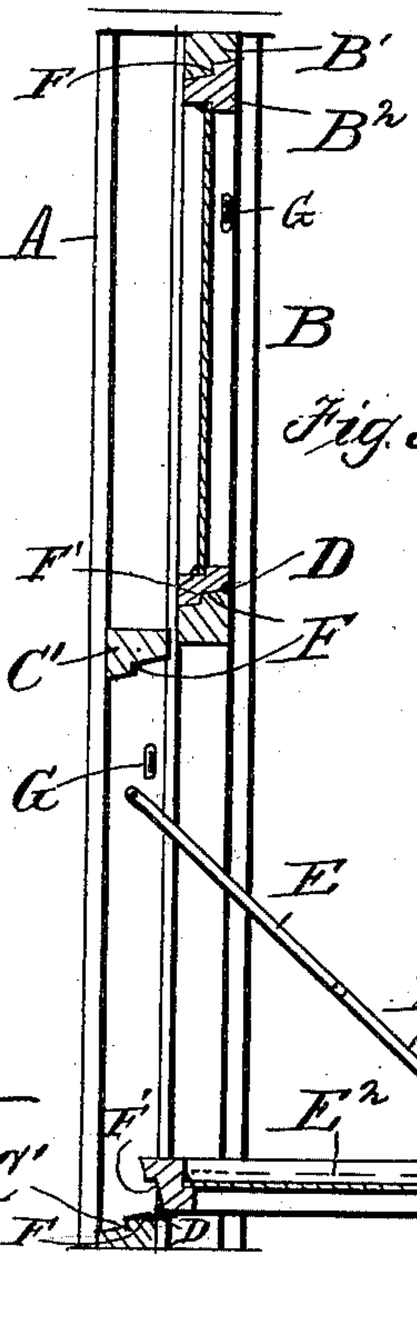

Fig. 3.

Fig. 4.

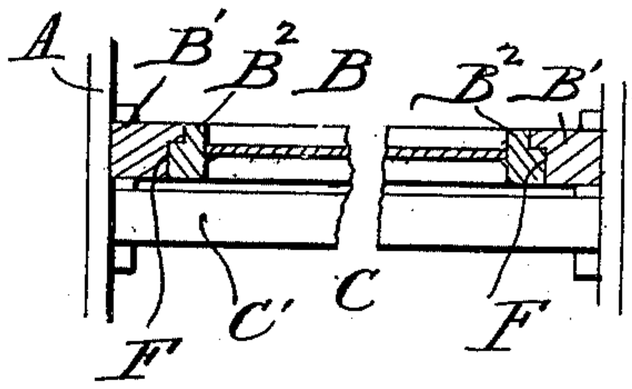

Fig. 5.

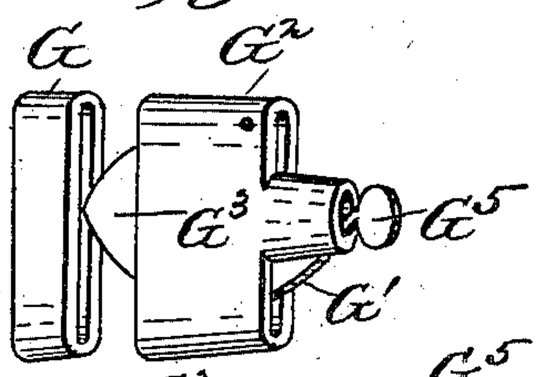

Fig. 7.

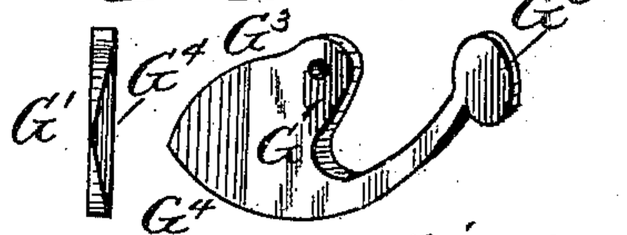

Fig. 6.

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UNITED STATES PATENT OFFICE.

BENJAMIN W. JONES, OF DUBUQUE, IOWA.

WINDOW SASH AND FRAME.

SPECIFICATION forming part of Letters Patent No. 652,273, dated June 26, 1900.

Application filed April 16, 1898. Serial No. 677,874. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. JONES, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Window Sashes and Frames; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to window sash and frames, and particularly to that class wherein the sash are adapted to swing upon horizontal pivots or hinges; and among the objects in view is to provide an improved sash which is adapted to be raised and lowered in the usual manner within the frame or which may lie within a stationary window and is also adapted to be swung upon horizontal pivots or hinges, whereby to enable the glass to be more readily cleaned upon both sides or to be readily replaced when broken without necessitating the removal of the sash from the frame or to be readily operated from the inside for cleaning or other purposes without the necessity for removing or interfering with the window stops or beads, outside or inside blinds, screens, shades, or curtains.

A further object is to provide such a construction of sash as will effectually prevent the entrance of air, dust, and moisture at the joints, and, finally, the object is to simplify, improve upon, and perfect the general construction of the parts of a reversible window-sash, as hereinafter specified; and with the above objects in view the invention consists in the novel construction, arrangement, and combination of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claim.

In the drawings, Figure 1 is a front view of a window sash and frame constructed in accordance with this invention. Fig. 2 is a perspective view showing the hinged section of the upper sash as swung down into position for cleaning. Fig. 3 is a vertical sectional view of the parts as shown in Fig. 2. Fig. 4 is a horizontal sectional view on line $x\ x$ of Fig. 1. Fig. 5 is a perspective view of the locking device for the sash. Fig. 6 is a like view of the pivoted thumb-lever detached. Fig. 7 is an end view of the thumb-lever, showing the bevel.

A indicates the window-frame, which in its general construction is similar to the ordinary window-frame.

B C indicate the window-sash, which are adapted to move vertically within ordinary guideways in the frame. Each sash is constructed in two sections—a complete outer framing adapted to travel within the window-frame A and a complete inner framing hinged at the lower edge to the said outer framing and containing the glass. The outer sections of the sash B and C are indicated by B′ C′, respectively, while the inner hinged sections are indicated by B^2 C^2, respectively. The lower edges of the sections B^2 C^2 are hinged at D to the lower horizontal rails of the two sash, and said sections are each adapted to be swung upon said hinges into a horizontal position, as indicated, and their limit of movement is regulated by means of links or rods E E′, jointed to each other and attached to inner and outer sections of the sash. The said links are adapted to lie within pockets E^2, formed in the sections B^2 C^2 when the said sections are in a closed or vertical position.

In order to make a close-fitting joint between the inner swinging sections and their outer containing sections, the side portions and upper and lower portions of the outer sections are rabbeted, as at F, to receive the said inner sections. As will be seen, the rabbets of the upper and lower rails of the outer sections are of peculiar shape—that is to say, each upper and lower rail is cut to form two inclined surfaces, and these surfaces are joined by a vertical surface, thus giving to the rabbet a shape which will prevent or at least retard to a maximum extent the entrance of a driving rain or wind. The sides and upper or lower portions of the inner sections are also rabbeted, as at F′, to make a close joint with the outer sections, each of the rabbets F′ being similar in construction or shape to the rabbets F. Thus I obtain a practically air, dust, and water proof joint between the sections of each sash. In order to render the connection between the inner and outer sections of each sash as rigid as possible and also prevent unauthorized manipulation of

the swinging sections from the outside, I provide each sash with a locking device. (Shown more clearly in Figs. 5, 6, and 7.) Said locking device consists of a socket portion or keeper G, adapted to be fitted into the side rails of the sections B′ C′ near the upper end, and a thumb latch or lever G′, pivoted within a housing G^2, secured to the side rails of the sections B^2 C^2, the point or end G^3 of the lever G′ being adapted to normally engage within the socket or keeper G when the swinging sections are in vertical position and hold said sections rigidly in place. To adapt the end of the lever G′ to readily snap into its keeper when the swinging section is being closed, I bevel the engaging end of the lever, as at G^4, whereby the pressure exerted in closing the swinging section causes the lever to first swing on its pivot and then to snap into the keeper the moment the end G^3 clears the edge of the socket in the keeper. When it is desired to swing the hinged section of a sash into an open position for cleaning, or, otherwise, by pressing upwardly upon the opposite end G^5 of each lever G′, the end G^3 is drawn within the housing, thus enabling the swinging section to be operated.

What I claim, and desire to secure by Letters Patent, is—

In a window, the combination with the frame, of a sash adapted to move vertically within said frame or lie stationary therein, said sash comprising an outer sliding section and an inner section the lower rail of which is hinged to the lower rail of the outer section and the hinged section being adapted to be swung downwardly into a substantially-horizontal position, the side rails of the hinged section having pockets E^2, links E E′ pivoted together and to the side rails of the hinged and outer sections and adapted to unfold and support the hinged section in its horizontal position and to fold together and lie within the pockets E^2 when the hinged section is moved into its closed or vertical position, the side and upper rails of the outer section being rabbeted at F and the like rails of the hinged section being rabbeted at F′, said rails adapted to coöperate as described to make tight joints, and a catch device comprising a keeper in the side rail of the outer section, a housing G^2 on the adjacent rail of the inner section, a lever G′ pivoted within the housing and having a beveled end normally projecting beyond the housing and adapted to engage the keeper and a projecting portion G^5 adapted to be operated to cause the beveled end to free the keeper, as described.

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