

No. 766,860.

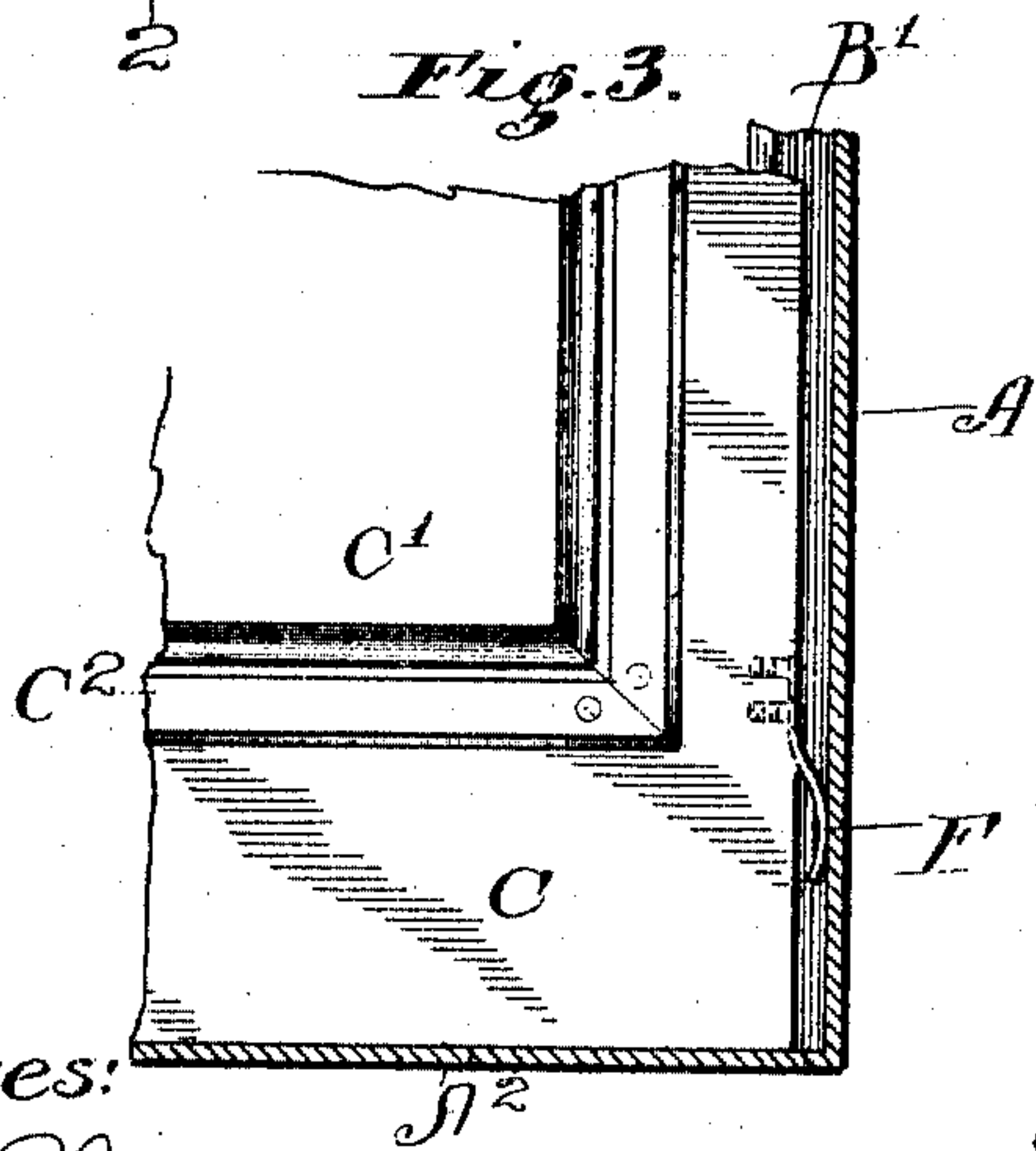
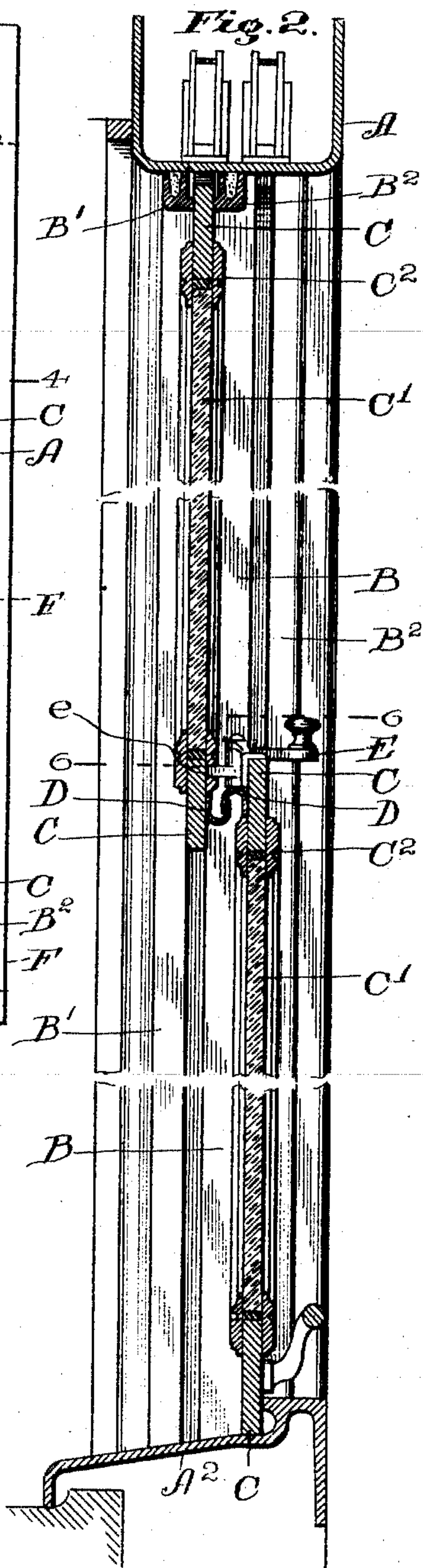
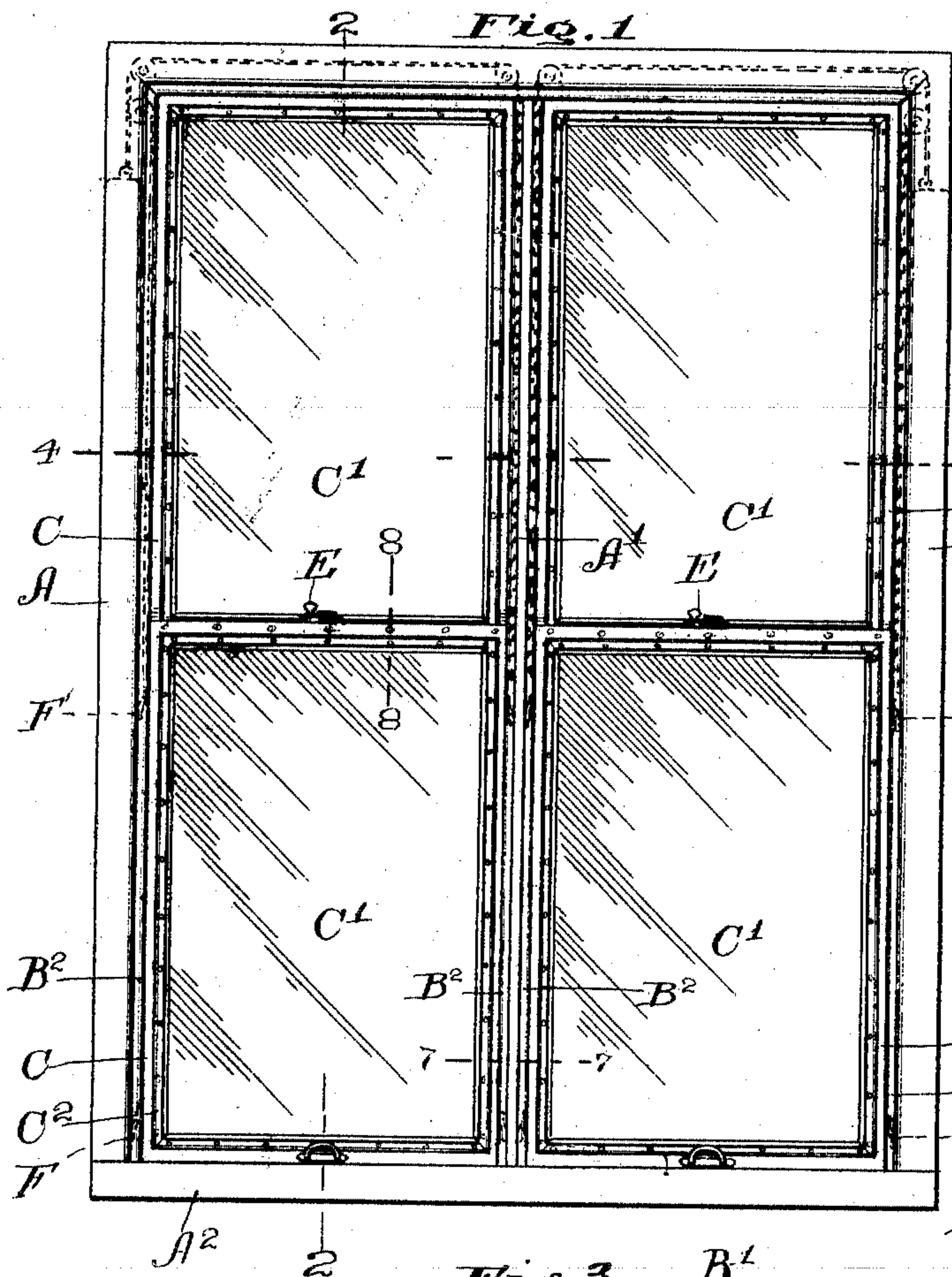
PATENTED AUG. 9, 1904.

F. A. WINSLOW.
WINDOW FRAME AND SASH.

APPLICATION FILED APR. 8, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

Chas. O. Shervey
X. M. Cornwall

by

Inventor:
Francis A. Winslow

AF Putner

Atty.

No. 766,860.

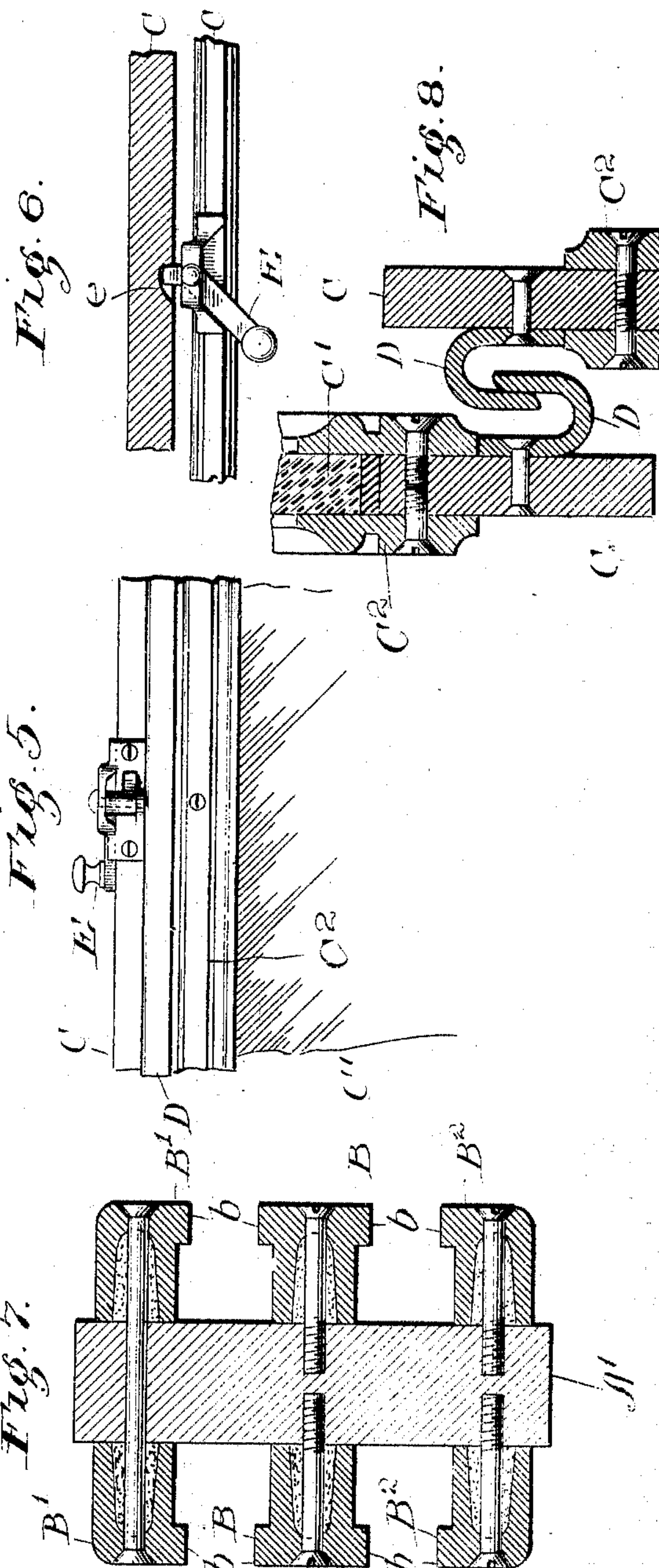
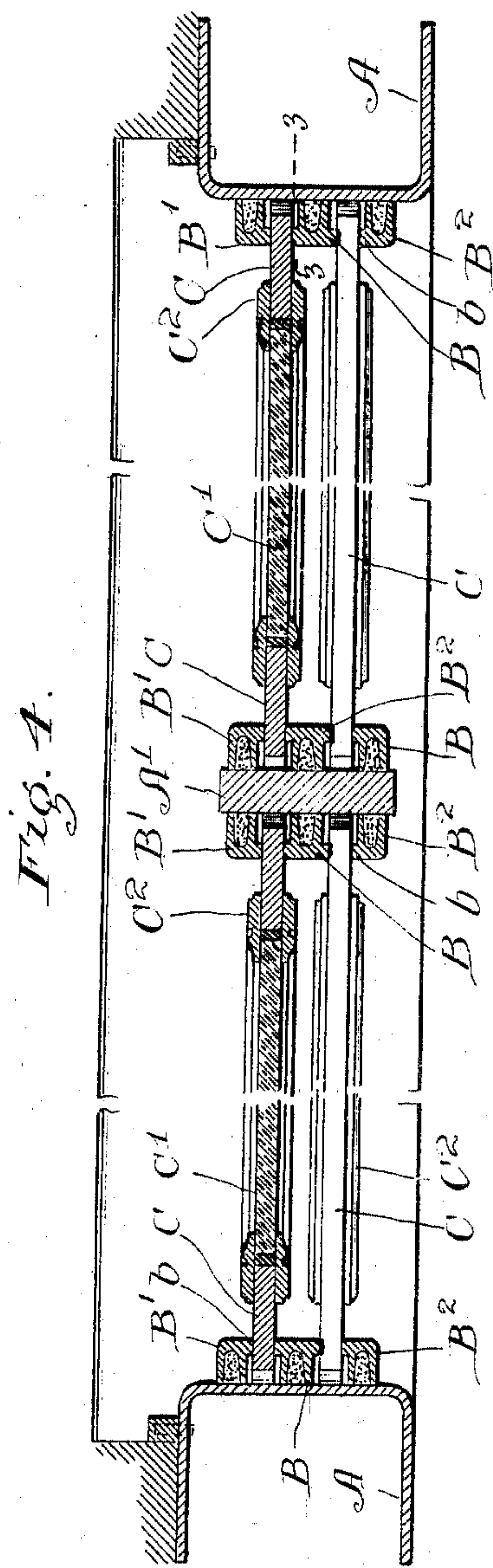
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2 SHEETS—SHEET 2.



Witnesses:

Chas. C. Sherway
J. M. Cornell.

Inventor:

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JK4.

UNITED STATES PATENT OFFICE.

FRANCIS A. WINSLOW, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WINSLOW BROS. COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 766,860, dated August 9, 1904.

Application filed April 8, 1904. Serial No. 202,170. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS A. WINSLOW, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window Frames and Sash, of which the following is a specification.

My invention relates to certain new and useful improvements in window construction; and its object is to produce a structure which shall have certain advantages which will appear more fully and at large in the course of this specification.

To this end my invention consists in certain novel features of construction and arrangement, which are fully illustrated in the accompanying drawings and described in this specification.

In the aforesaid drawings, Figure 1 is an elevation of a window-frame and the sash therein embodying my improved construction. Fig. 2 is a transverse vertical section in the line 2 2 of Fig. 1. Fig. 3 is a longitudinal vertical section in the line 3 3 of Fig. 4. Fig. 4 is a horizontal section in the line 4 4 of Fig. 1. Fig. 5 is a detail elevation of the sash-lock used looking at the lower sash from the outside. Fig. 6 is a section in the line 6 6 of Fig. 2, illustrating the sash-lock in plan. Fig. 7 is a detail horizontal section in the line 7 7 of Fig. 1, and Fig. 8 is a detail vertical section in the line 8 8 of Fig. 1.

Referring to the drawings, A is a suitable frame, preferably U-shaped in cross-section to accommodate the usual sash-weights, pulleys, and the like, said frame extending along the two sides to form uprights and across the top to form the lintel. The sill is shown at A² and connects the two uprights of the frame in the usual manner. The arrangement shown is for a double window, in which case a middle upright A' is provided. To each of the inner vertical faces of the uprights of the frame and to both faces of the upright A' are secured guide-strips B and stops B' B², preferably constructed of bronze or brass to guard against rust or corrosion and forming two

parallel vertical guideways on the uprights. Stops similar to the strips B' B² extend across the lintel to complete the channel for the upper sash. The guide-strips and stops are formed with overhanging flanges b on their adjacent edges, so that the guideways are restricted at their forward edges, as seen in Fig. 7. They are also made hollow, the hollow spaces filled with putty or cement, and secured to the uprights by screws or rivets, the outer stops B' being preferably secured in place by rivets, as they are ordinarily never removed from the sash. In putting these guide-strips and stops upon the window-frame they are first filled with putty or other plastic material, enough being used to crown their faces, so that when they are secured in place a perfectly tight joint will be made between the frame and guide-strips, any superfluous putty being forced out between the meeting faces. In this way any uneven spaces between the guide-strips and window-frame will be filled with the cement or putty and the joint will be proof against wind and rain.

The sash are preferably constructed of outer rectangular frames made from a single plate of metal, and each of these plates is provided with a rectangular opening to receive a sheet of glass C', which is held in place by strips of molding C², screwed or otherwise secured to the sheet-plates C and overhanging the edges of the glass plates. In this way a sash is provided which is very light and cheap, as well as strong. The ordinary cords, sash-pulleys, and weights are used to balance the sash in the usual manner.

Each of the lower sash is provided at its upper edge on the outside with an overhanging strip of metal D, having an inverted-U-shaped cross-section, and near the lower inside edge of the upper sash is a similar strip, the two strips being adapted to interlock, as illustrated in Figs. 2 and 8, when the sash are in their closed positions, thus making a tight joint between the two. The free edges of these U-shaped strips are preferably curved, as illustrated in Fig. 8, to insure their engagement in the proper manner. Each of

the lower sash is provided at its top with a sash-lock E, having a bell-crank lever, and the corresponding upper sash is notched at *e* to receive the end of said lever, as illustrated in Fig. 6. This lever, together with the U-shaped strips D, affords excellent means for locking the sash together, the lever acting to force the sash apart, consequently drawing the U-shaped strips D into close contact instead of drawing the sash together, as is the case with the ordinary sash-locks now in use. Each of the sash is provided with springs F on each side, bearing against the uprights and adapted to take up the expansion and contraction which sash of this kind are subject to, and thereby prevent rattling of the sash in the frame.

It will be seen that this structure is particularly desirable for use in fireproof buildings, it being possible to make all the parts of metal, and in the preferred form of construction herein illustrated the entire structure with the exception of the glass is metallic. It will be seen also that the structure is easily assembled and is light and neat in appearance. Furthermore, by filling the hollows in the guideways and stops with putty or cement the metal is deadened, so as to prevent the unpleasant sound which would be likely to be caused by moving a metal window-frame.

While I have herein shown and described in detail the preferred form of my improved structure, I do not intend to limit myself by such specific description to such precise details, for I realize that considerable variation can be made in the structure without departing from my invention.

I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a frame, of parallel vertical guide-strips secured to said frame, said strips

being hollowed out on the side adjacent to the frame and the hollows filled with a plastic material.

2. In a device of the class described, the combination with a metallic outer frame, of parallel vertical guide-strips upon the inner faces of said frame forming parallel opposing channels, a rectangular frame in each of said channels consisting of a single plate of metal having a central rectangular opening, glass plates in said openings, and moldings secured to the rectangular frames and overhanging said glass plates.

3. In a device of the class described, the combination with a window-frame, of a pair of window-sash guided therein, strips secured to the adjacent meeting edges of said sash, and having overhanging portions adapted to engage with each other, and a sash-lock constructed and arranged to force said windows apart whereby said strips will be brought into close contact.

4. In a device of the class described, the combination with a frame, of upwardly-extending vertical guide-strips secured to said frame, said strips being hollow on the sides adjacent to the frame and the hollows filled with an overflowing quantity of plastic material whereby when said strips are crowded down upon the frame, the surplus amount of plastic material will be forced out between the edges of the strip and the frame to make a tight joint.

In witness whereof I have signed the above application for Letters Patent, at Chicago, in the county of Cook and State of Illinois, this 28th day of March, A. D. 1904.

FRANCIS A. WINSLOW.

Witnesses:

CHAS. O. LAW,
PHILIP G. CARTER.