No. 666,112. Patented Jan. 15, 1901.

C. E. REYNOLDS.

WINDOW OR DOOR.

(Application filed Oct. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

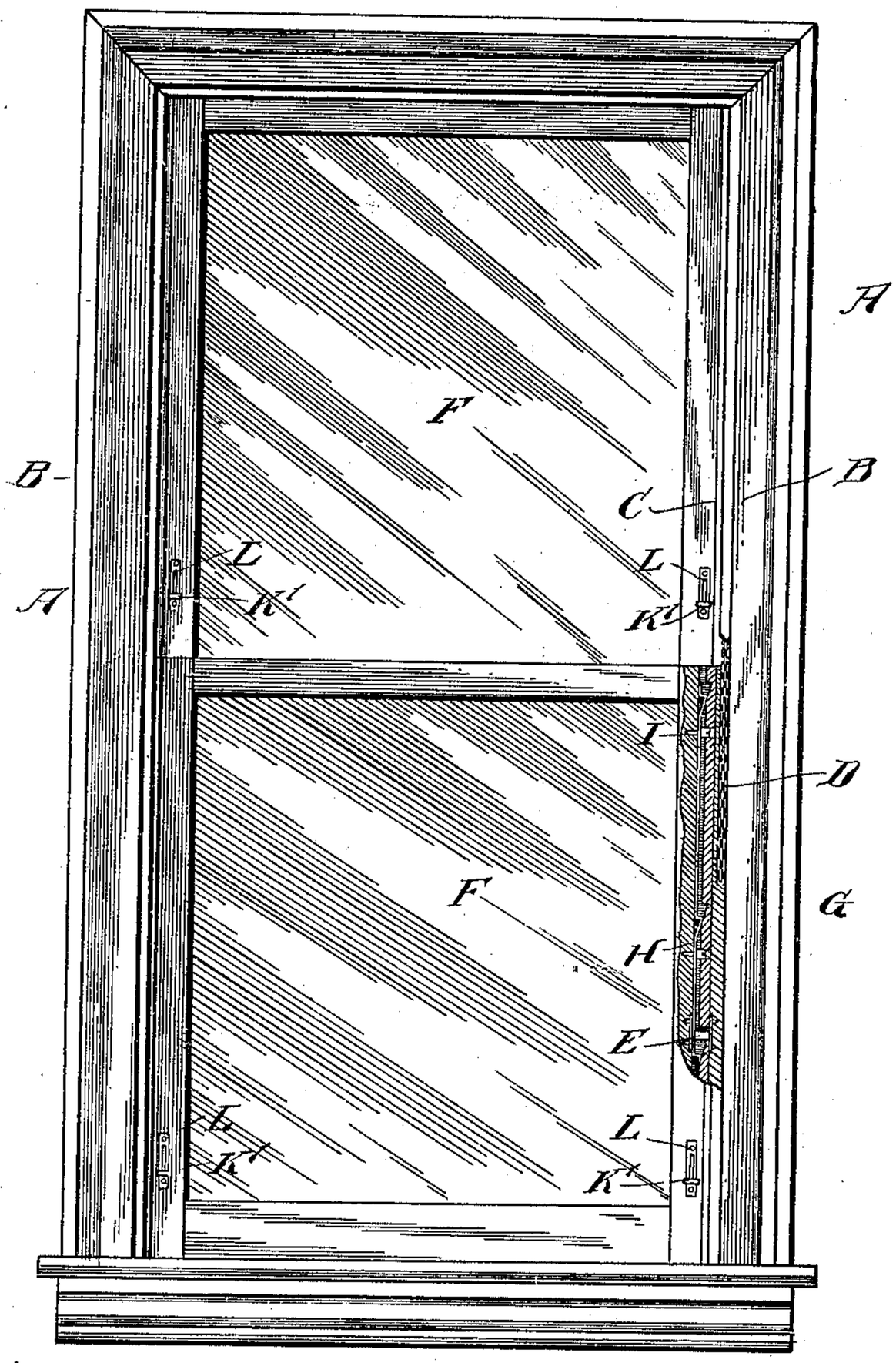
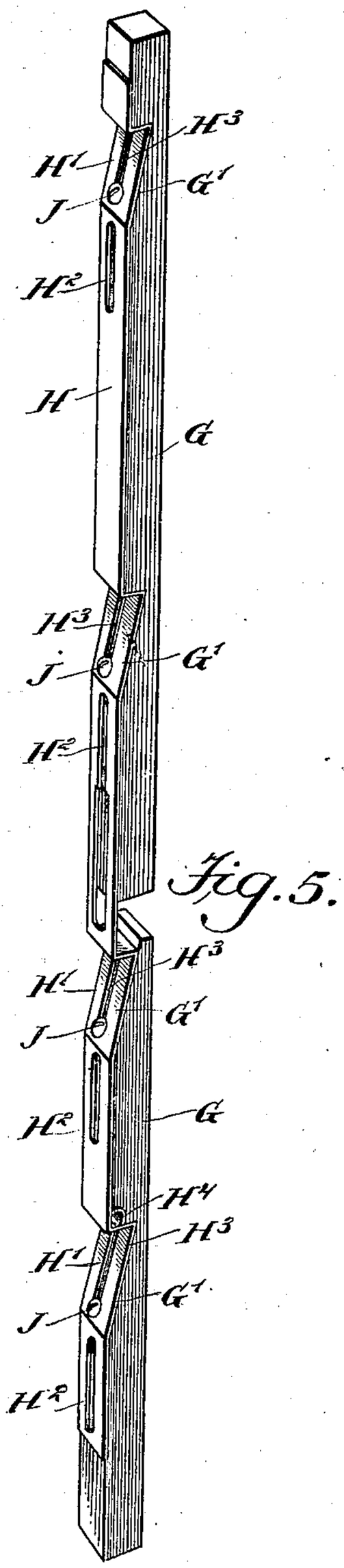


Fig. 5.



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2 Sheets—Sheet 2.

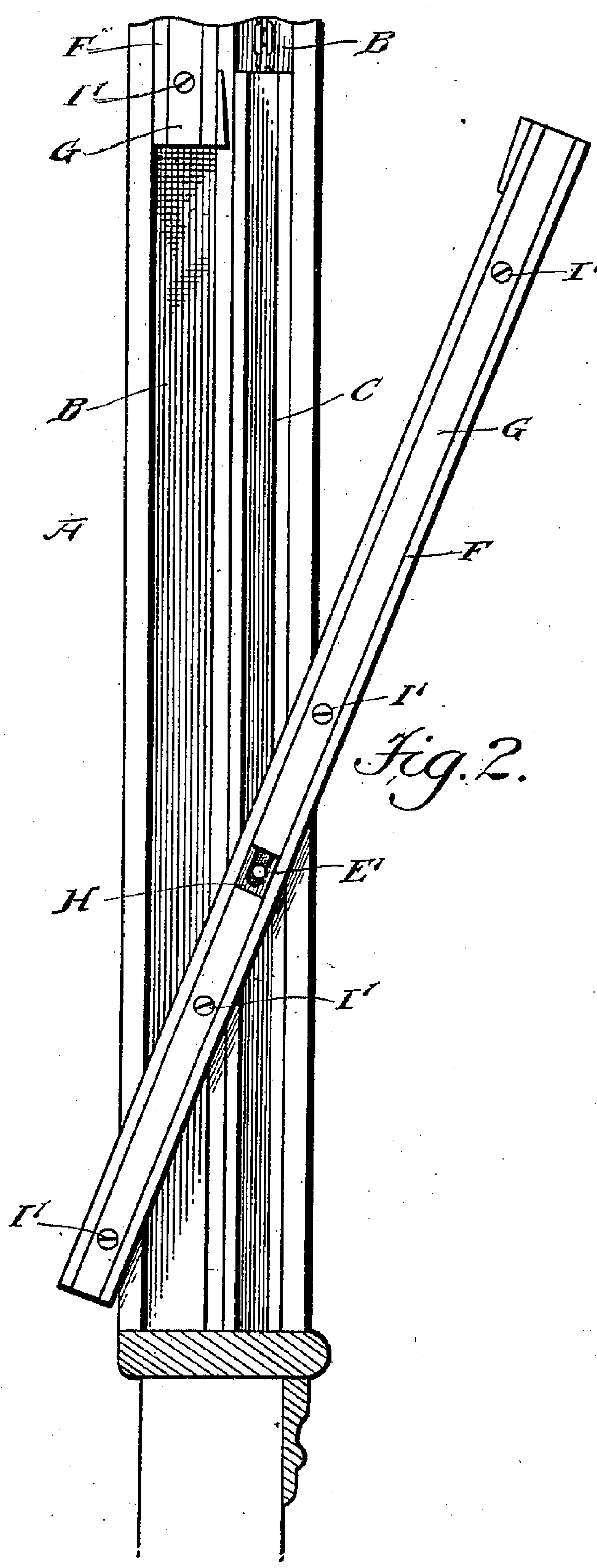


Fig. 2.

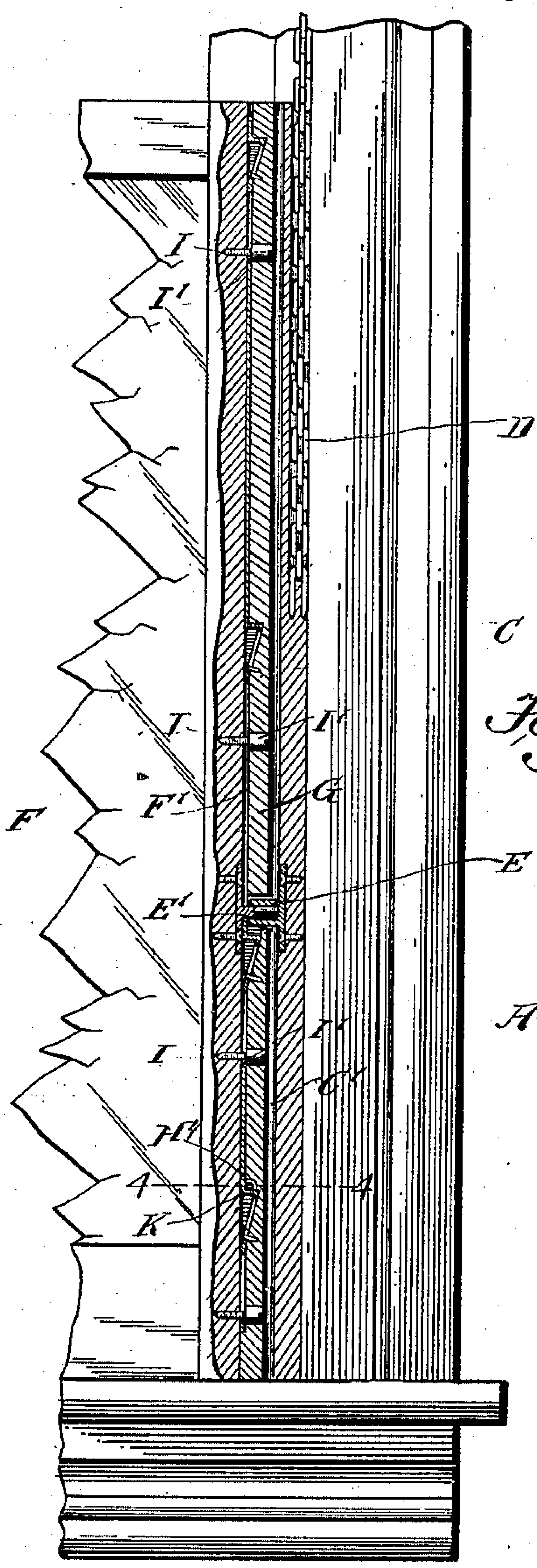
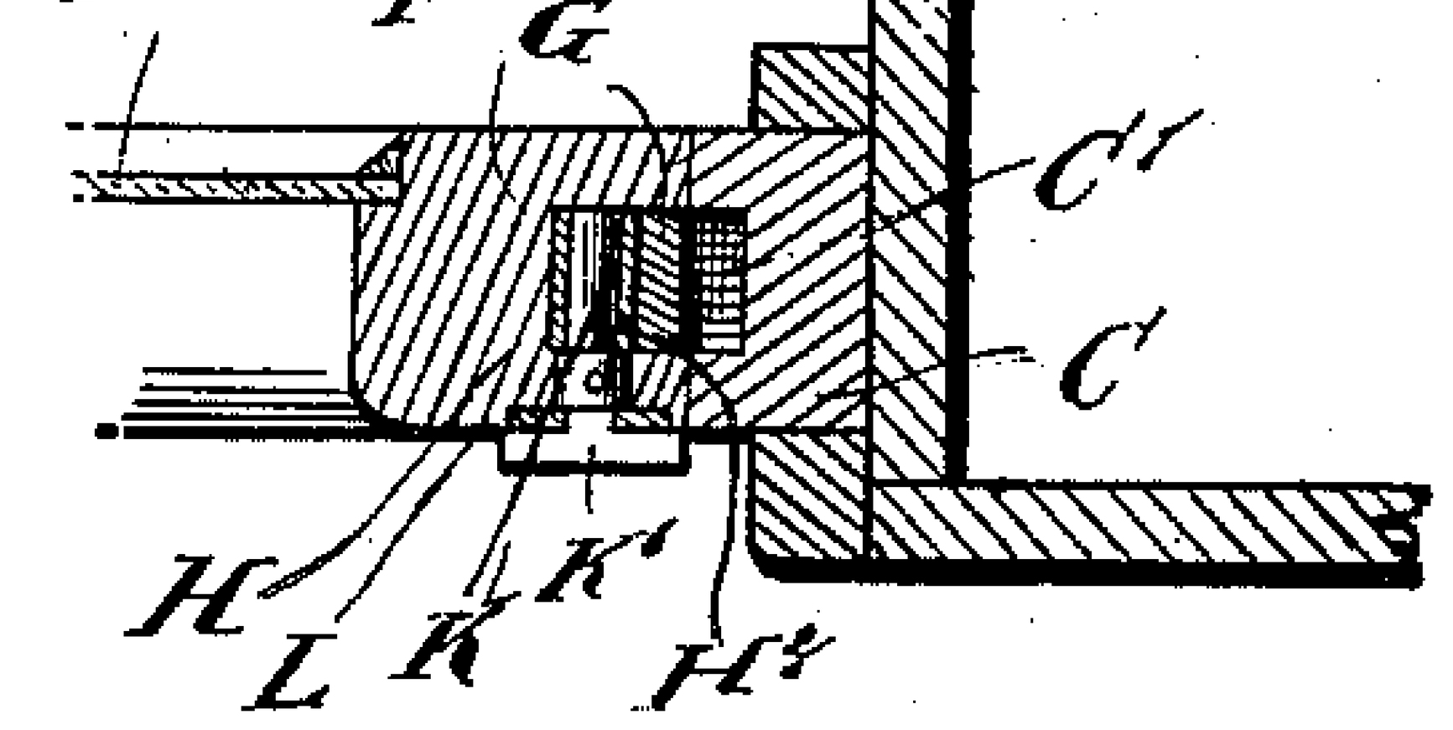


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES E. REYNOLDS, OF NEW YORK, N. Y.

WINDOW OR DOOR.

SPECIFICATION forming part of Letters Patent No. 666,112, dated January 15, 1901.

Application filed October 5, 1900. Serial No. 32,126. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. REYNOLDS, a citizen of the United States, and a resident of the city of New York, borough of Bronx, in the county and State of New York, have invented certain new and useful Improvements in Windows or Doors, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in windows, doors, and like devices whereby the window-sash, door, or like part can be readily manipulated in the usual manner or disconnected from the adjacent part for cleaning, repairing, or other purposes and whereby a perfect joint is produced between the parts to prevent draft and exclude dust, rain, snow, and the like.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement as applied to a window and with parts shown in section. Fig. 2 is an enlarged transverse section of the window-casing with one of the windows in an angular position. Fig. 3 is an enlarged sectional side elevation of the improvement. Fig. 4 is a sectional plan view of the same on the line 4 4 in Fig. 3. Fig. 5 is a perspective view of a joint-strip hereinafter more particularly described.

The window-casing A is provided with the usual guideways B, in which are mounted to slide auxiliary stiles C, hung on counterbalanced ropes or chains D, said auxiliary stiles carrying pivot-bearings E for the pivots E′, secured to the sides of the stiles of the window-sashes F, so that each sash moves with its auxiliary stiles up or down to open or close the window, and whereby the sash can be turned on its pivot to reverse the window, as indicated in Fig. 2, and permit of cleaning the outside of the window from the inside of the room.

Each auxiliary stile C is formed with a groove C′ opposite a corresponding groove F′ in the adjacent stile of the sash F, and the said grooves F′ C′ are adapted to be engaged by a joint-strip G, (see Fig. 5,) formed with inclines G′, engaged by corresponding inclines H′ on a plate H, held by screws I to the stile of the sash F, the screws I extending through elongated slots H^2 in the plate H to permit up-and-down movement of the plate, but to hold said plate against sidewise movement. The heads I′ of the screws I are of considerable length to form guideways for the joint-strips G and hold the latter against up-and-down movement, but permit sidewise movement thereof, so as to move the strip G either wholly into the groove F′ or partly into the groove C′ and the groove F′. In order to do this, the plate H is moved lengthwise by the operator, so as to cause the inclines H′ to move the strips G sidewise into or out of the groove C′, it being understood that when the strip G extends into the groove G′ and partly into the groove F′ then a firm joint is made between the sash and its auxiliary stile to prevent draft and to exclude dust, rain, and the like and also to hold the sash F from turning on its pivots E′. When the strip G is moved out of the groove C′ and wholly into the groove F′, then the sash F can be turned on its pivots E′ for the purpose above mentioned. (See Fig. 2.) On each incline G′ of the strip G is secured a screw J, extending through an elongated slot H^3 in the plate H to insure proper movement of the strip G in a sidewise direction when the plate H is moved up or down.

In order to manually move the plate H up or down, said plate is provided with a recess H^4, (see Figs. 3, 4, and 5,) adapted to be engaged by a pin K, extending transversely and fitted to slide in guideways L, attached to the sash F, at the inside thereof, a handle K′ projecting into the room from said pin K to allow the operator to take hold of the handle and move the pin up or down and with it the plate H for the purpose above described. When the handles K′ are in a lowermost position, as shown in Fig. 1, then the several strips G extend partly in the grooves F′ and C′ to form a tight joint between the stiles of the sashes and the auxiliary stiles C and to hold the sashes from turning on their pivots.

When it is desired to turn a sash on its

pivots E′, then the operator moves the handles K′ upward, so as to cause the plates H to draw the strips G inward out of the grooves C′ and completely out of the grooves F′. When this has been done, the sash is free to swing on its pivots E′, as above described and for the purpose mentioned.

As shown in Fig. 5, the strip G is preferably made in two parts to allow convenient passage of the pivot E′ and its bearing E.

It is understood that the device may be conveniently used on screens or on doors to form a perfect joint between the door or screen and its casing when the door or screen is in a closed position. In this case the auxiliary stiles are not employed, it being understood that the strip G, with the plate H, is held in a recess in the door or screen for the said strip G to engage a corresponding recess in the casing of the door or screen.

The device is very simple and durable in construction, is cheap to manufacture, and can be easily manipulated by an unskilled person.

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

1. In a window or door, a joint and locking strip adapted to extend simultaneously into adjacent grooves, and arranged to wholly pass into one of the said grooves, the strip having a plurality of inclines, and an operating-plate mounted to slide lengthwise of the said joint-strip, and having a plurality of inclines engaging the corresponding inclines on said strip, as set forth.

2. In a window or door, a joint and locking strip adapted to extend simultaneously into adjacent grooves, and arranged to wholly pass into one of the said grooves, the strip having a plurality of inclines, an operating-plate mounted to slide lengthwise of the said joint-strip, and having a plurality of inclines engaging the corresponding inclines on said strip, and means for moving said plate lengthwise of said strip, as set forth.

3. In a window or door, a joint and locking strip adapted to extend simultaneously into adjacent grooves, and arranged to wholly pass into one of the said grooves, the strip having a plurality of inclines, an operating-plate mounted to slide lengthwise of the said joint-strip, and having a plurality of inclines engaging the corresponding inclines on said strip, and means for moving said plate lengthwise of said strip, and guide-pins to permit the strip to slide sidewise and to prevent the strip from moving lengthwise, said guide-pins also serving to hold said plate to its particular part and to guide it lengthwise and hold it against sidewise movement, as set forth.

4. In a window, the combination with a frame, grooved auxiliary stiles mounted to slide in the frame, and a grooved sash pivoted to the stiles, of a joint-strip provided with inclines, and a bar or plate provided with inclines and held to move longitudinally on the sash, substantially as described.

5. In a window, the combination with a frame, grooved auxiliary stiles mounted to slide in the frame, and a sash pivoted to the stiles and provided with grooves registering with the grooves of the stiles, of a joint-strip provided with inclines, a plate provided with inclines engaging the inclines of the joint-strip and held to move longitudinally on the sash, and a connection between the strip and plate whereby the strip is held from longitudinal movement, substantially as described.

6. In a window, the combination with a frame, grooved auxiliary stiles mounted to slide in the frame, and a sash pivoted to the stiles and provided with grooves registering with the grooves of the stiles, of a joint-strip provided with inclines, a plate having inclines engaging the inclines of the joint-strip, and with a recess, said plate being mounted to slide longitudinally on the sash, a connection between the plate and strip, whereby the strip is held from longitudinal movement, and a pin mounted to slide in the sash and engaging the recess of the plate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. REYNOLDS.

Witnesses:

THEO. G. HOSTER,

EVERARD BOLTON MARSHALL.