

(No Model.)

2 Sheets—Sheet 1.

E. W. ALLEN.

SASH FASTENER.

No. 361,109.

Patented Apr. 12, 1887.

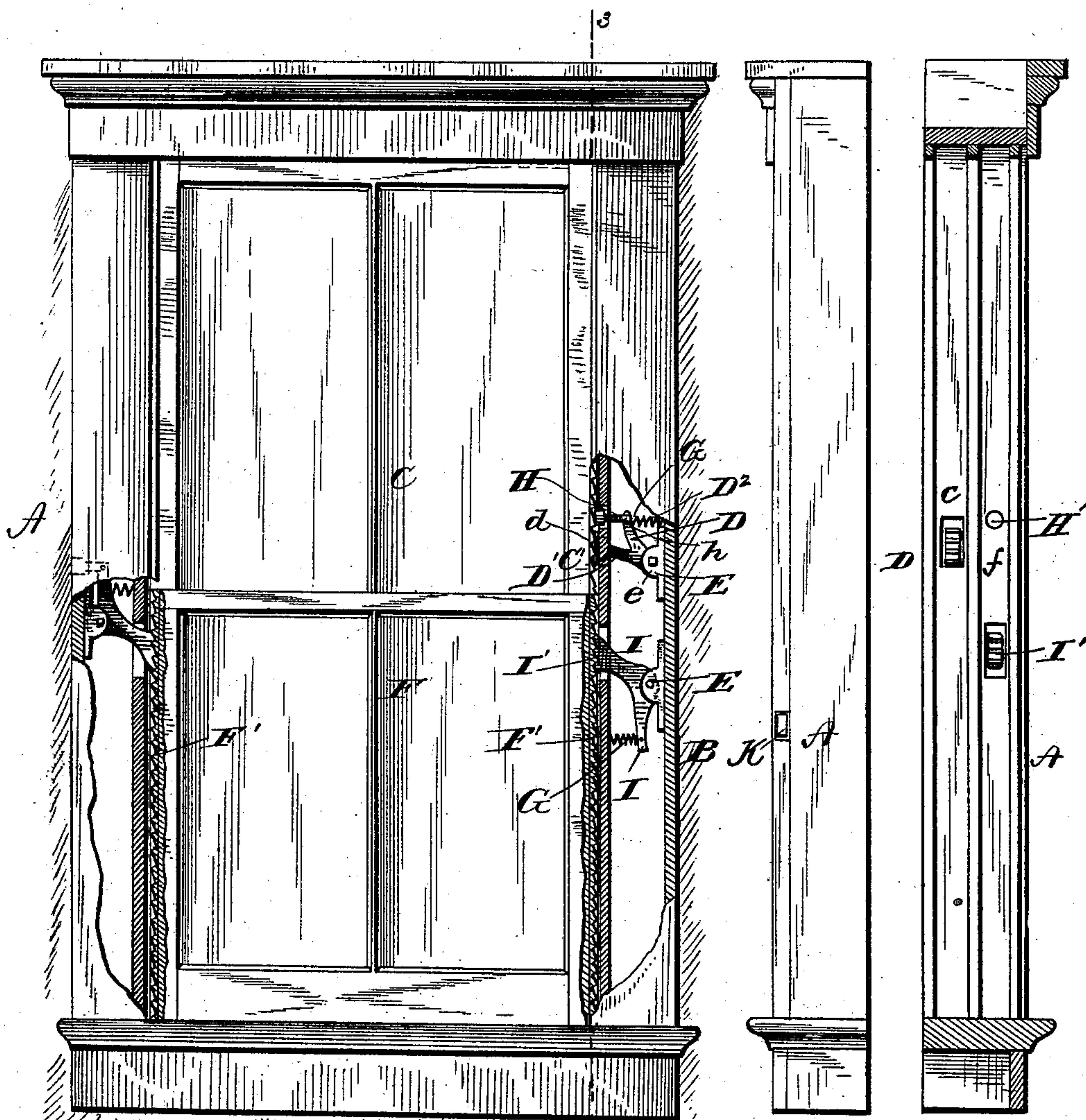


Fig. 1.

Fig. 2. Fig. 3

Witnesses

F. L. Omand

N. S. Cowf

Inventor
E. W. Allen,
By his Attorney
Louis Daguer & Co.

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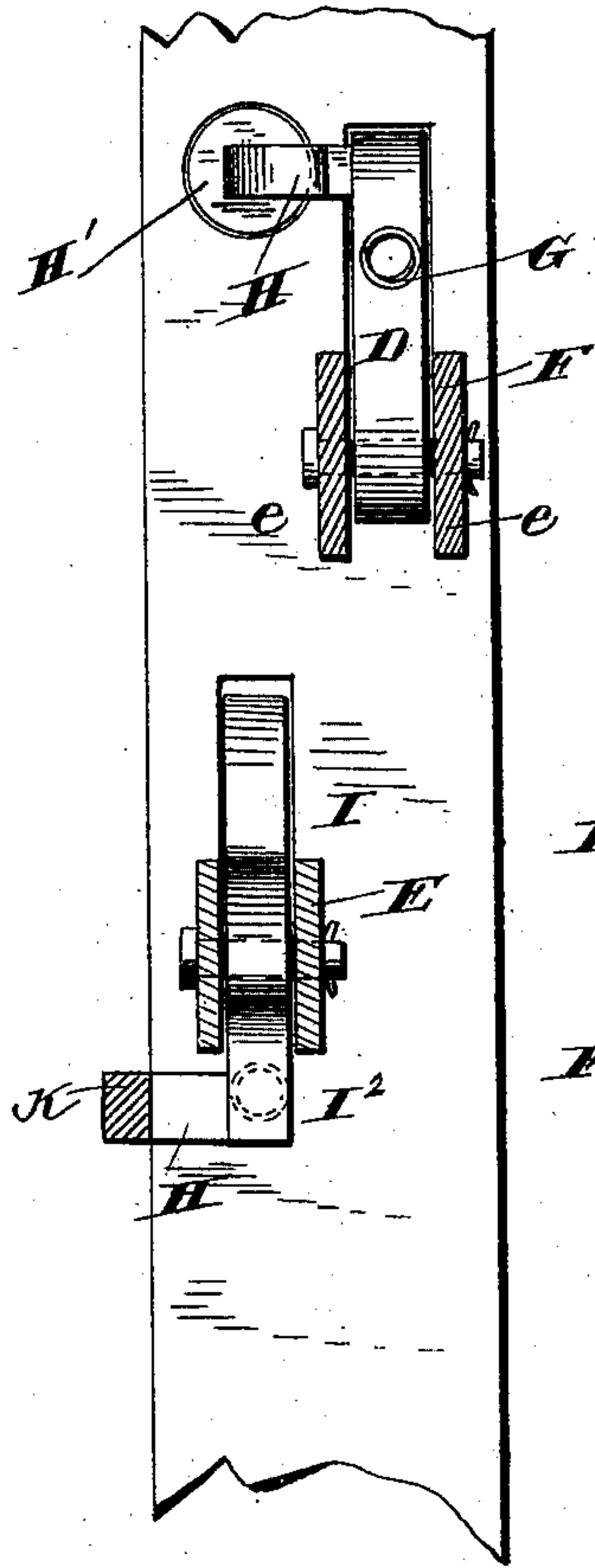


Fig. 4.

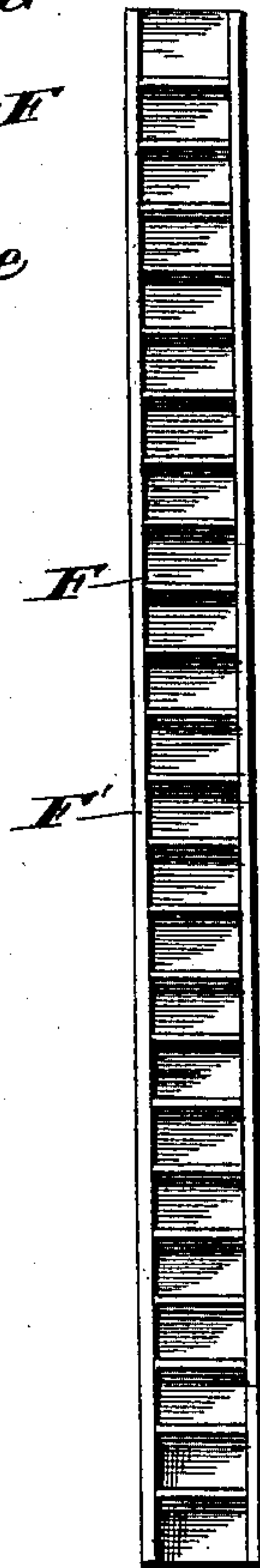


Fig. 5.

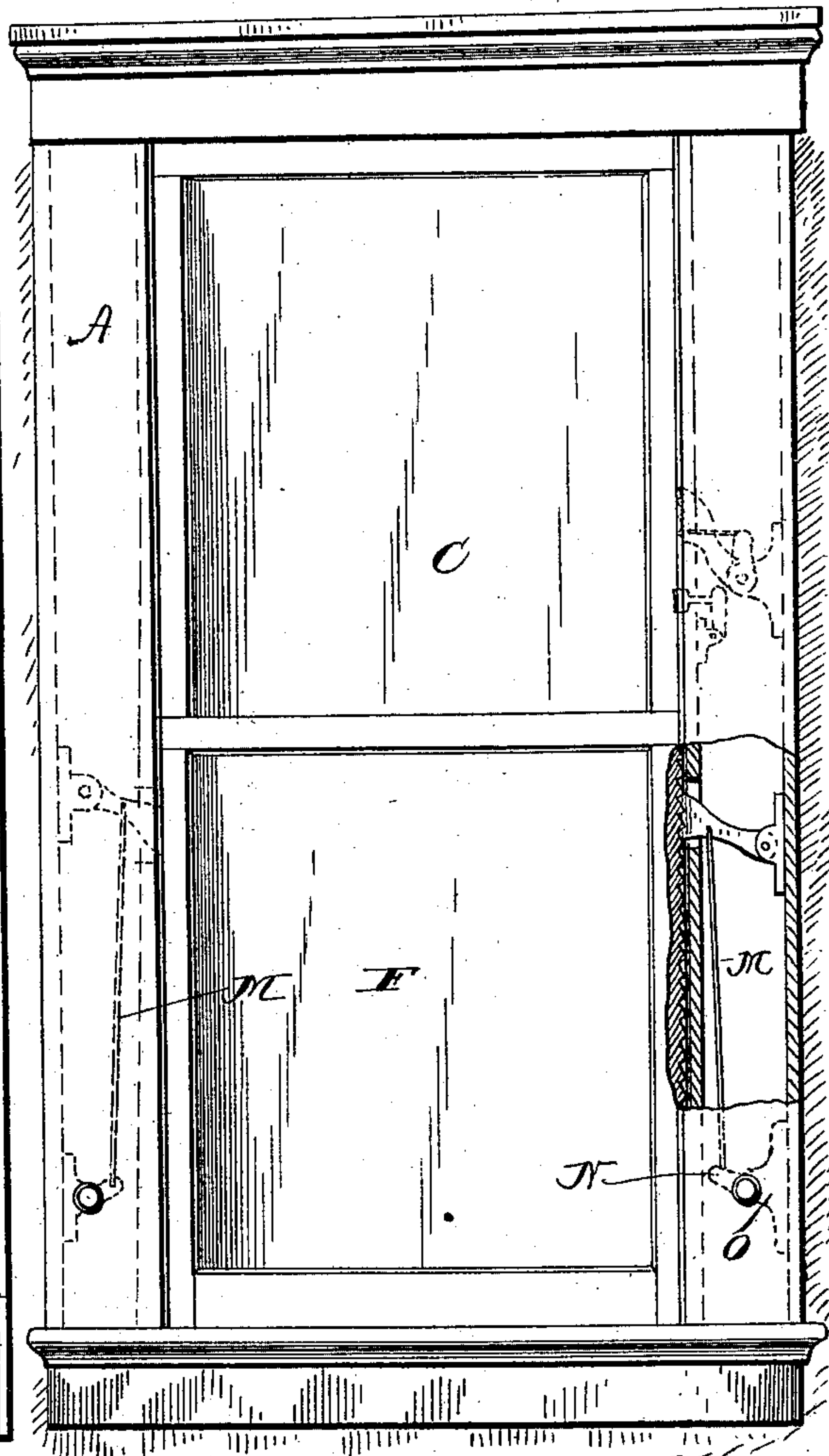


Fig. 6.

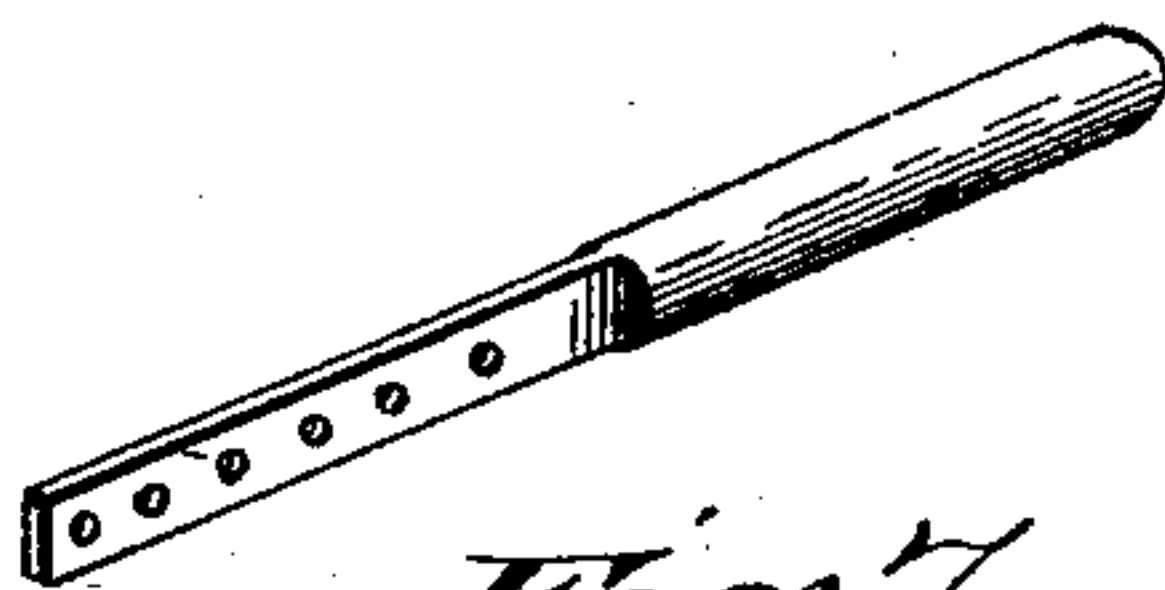


Fig. 7.

Witnesses

F. L. Ourand
B. S. Cowd.

Inventor

E. W. Allen,
By his Attorneys,
Laurie Dagg & Co.

UNITED STATES PATENT OFFICE.

ELNATHAN W. ALLEN, OF BELLE PLAINE, KANSAS.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 361,109, dated April 12, 1887.

Application filed January 22, 1887. Serial No. 225,091. (No model.)

To all whom it may concern:

Be it known that I, ELNATHAN W. ALLEN, a citizen of the United States, and a resident of Belle Plaine, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Sash-Locks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front elevation of a window and casing, a portion of the latter being removed to show the operative parts of my invention. Fig. 2 is an edge view of the casing. Fig. 3 is a section on the line 3 3, Fig. 1. Fig. 4 is a side view of the sash-holding mechanism on the right-hand side of Fig. 1, the casing being broken away to more clearly show said parts. Fig. 5 is an edge view of one of the sash-frames. Fig. 6 is a front elevation, part of the casing being broken away, illustrating a modification. Fig. 7 is a detail view of one of the parts in perspective.

My invention relates to certain improvements in sash locks or holders by which the sashes, both upper and lower, may be positively held in any desired position in their casing; and it consists of certain improvements in the devices for effecting such results, as will be fully hereinafter pointed out in the specification and claims.

Similar letters of reference indicate like parts in all the figures.

In the drawings, A represents a window-casing, which may be of any desired construction, and B B represent the studs between which the casing is set.

The upper and lower sashes are indicated, respectively, by C and F.

I will first describe the mechanism for holding and locking the upper sash, C.

The outer edge of the window-sash frame, which is next the casing on the side of the lock or holding device, has attached to it a serrated or toothed plate, C', which may be of any suitable material.

D is a bell-crank lever pivoted in a holder, E, secured to one of the studs B, this holder having two ears or lugs, e, between which the

lever D lies. The longer arm, D', of this lever projects through an opening in the casing and extends into the way e, in which the upper sash moves. Its end is expanded into a foot, d, and has its face serrated, the serrations in this case projecting or pointing upward and being adapted to engage with the serrations on the plate C', and to thus prevent the upper sash from falling. The other arm, D², of this lever is borne against by a spring, G, so arranged as to force the serrated foot of arm D' into engagement with serrated plate C', so as to insure that the sash shall be caught and supported thereby at all times except when intentionally disengaged.

H is a push bar or arm connected by a pivot at h to the arm D² of the bell-crank lever D. It extends outward through an opening in that part of the casing forming the bottom of the groove or way f, in which slides the lower sash, and is provided at its end with an enlarged head or button, H', against which the finger is placed when it is desired to press in the bar H, in order to withdraw the serrated foot of arm D² from plate C', so that the upper sash may be lowered. This head or button, when pushed outward by spring G, lies about flush with the bottom of way f.

It will be seen that the device above described is entirely hid by the casing, and is so arranged that it cannot be operated by a person from the outside, while it may be conveniently operated by a person on the inside of the apartment. The device not only serves as a lock to the sash against interference from the outside, but it also serves to hold the sash at any height which may be desirable. When it is desired to raise the upper sash, it is not necessary that the button H should be pushed in by the person operating the window, as the relation of the teeth or serrations on the plate C' to those on the arm D² is such that the plate may slide past the arm without interference therefrom while going up, while it will be caught thereby when moving in the other direction.

Referring now to the devices for holding or locking the lower sash, it will be seen that they are in the main principles of construction similar to those just described for holding the upper sash; but with the lower sash I prefer to use two locks or sets of holding

devices, one to operate against upward movement of the sash, and the other to operate against downward movement thereof, although I wish to be understood as not limiting myself to both locking devices shown in connection with the lower sash, or to a single lock in connection with the upper sash.

Both edges of sash-frame F are provided with serrated plates F', similar to plate C', except that the teeth on the two plates incline in the opposite directions, on the one upward and on the other downward.

Referring to the device which engages with the right-hand edge of the lower sash, and which operates to prevent downward movement thereof, E represents a holder or bracket in which is pivoted a bell-crank lever, I, one arm of which, I', has its end serrated and adapted to engage with the plate F' carried by the sash-frame. The other arm, I'', has engaging with it a spring, G', which tends to force arm I' into engagement with the plate F'.

K is a push-bar connected with arm I'' of lever I, and extending outward through the casing to one side, where it may be easily reached and operated by a person on the inside of the apartment.

The bar K (as well as the bar H) I prefer to construct from malleable iron, or metal which may be bent, so that it may be shaped to suit any window to which my invention may be applied, and screw-thread its end, so that it may be secured to the plate or button L, (or H',) which may be formed of cast metal. As the widths of window-casings vary from four to eight inches, or even more, and as I desire to have my invention applicable to all windows, whether set or not, I make these push-bars sufficiently long to suit any ordinary window, and provide the end which is to engage with arm I'' with a series of apertures about half an inch apart. (See Fig. 7.) Such a bar after being bent into the proper shape has such portion as may be unnecessary cut off from its perforated end, and is then ready to be attached to the arm of the bell-crank lever.

The plate or button K lies flush with the side of the casing, so that it does not mar the appearance thereof.

The locking device on the left-hand side of the lower sash is similar to that just described, except that the teeth or serrations on the arm I'', which engage with the plate F', point in the opposite direction from those on the right-hand-side device, and hence this lock serves to hold the sash against upward movement.

When it is desired to raise the lower sash, the button or plate L on the left-hand side of the casing is pressed in, the device on the op-

posite side opposing but little, if any, resistance to the upward movement of the frame F. On the other hand, when it is desired to lower this sash, the right-hand plate or button is pressed in, which releases the locking device on that side and allows the sash to move downward.

In Fig. 6 I have illustrated a modification of my invention. In the construction therein shown the lever which engages with the sash has but one arm—that which carries the serrated face—and against this arm bears the spring which forces it into contact with the sash. M is a rod connecting the sash-engaging lever with a crank-arm, N, pivotally supported in a bracket, O. This crank-arm is rocked by a handle, which may be ornamented in any desired manner, projecting through the front wall of the casing. It will be understood, without further explanation, that one of these rods acts as a pull-rod and the other as a push-rod to effect the disengagement of the two sash-engaging levers, respectively.

I do not wish to be confined to the details of construction and the exact location of parts shown in the drawings, as they may be varied in many ways to suit the convenience or taste of the user, or to accommodate casings of different styles.

Blocking may be interposed between the stud B and the bracket E, should it be found necessary, in order to bring the bell-crank lever into engagement with the sash-frame.

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

1. The combination of the sash-frame, a bell-crank lever having one arm toothed or serrated and adapted to bear against the sash-frame, a holder in which the lever is pivoted, a spring bearing against the arm of the lever not engaging with the sash-frame, and a push-bar pivoted to the last said arm of the lever and extending laterally through the casing, substantially as set forth.

2. In combination with a window-casing and the upper sash moving therein, a locking-lever engaging with the upper sash, and a push-bar connected with said lever to disengage it from the upper sash, said bar extending through the casing, the inner end of said bar being provided with a series of holes, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ELNATHAN W. ALLEN.

Witnesses:

O. C. WATSON,
C. B. McALLISTER.