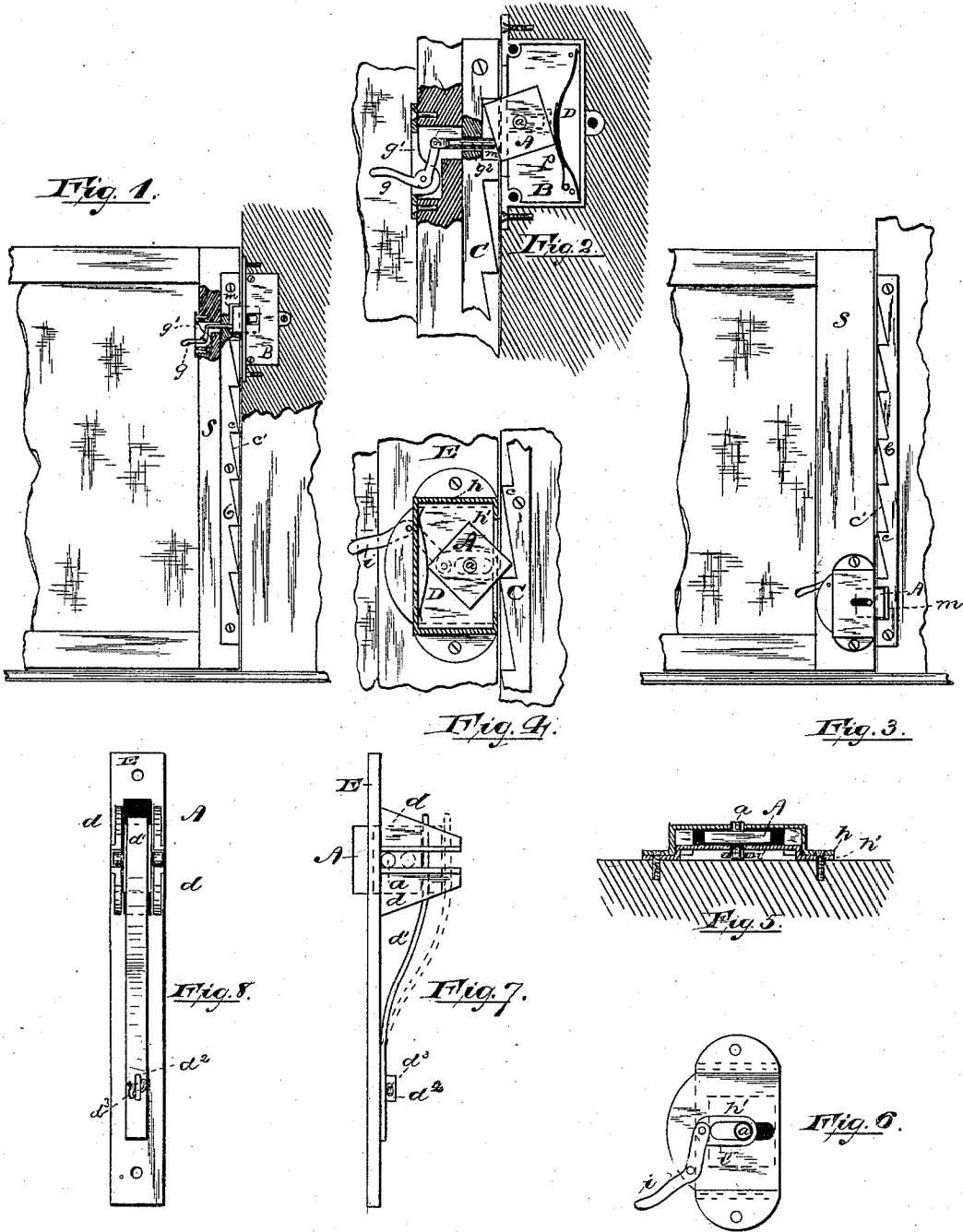


(No Model.)

D. E. BEDELL.
SASH FASTENER.

No. 314,782.

Patented Mar. 31, 1885.



Attest:

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UNITED STATES PATENT OFFICE.

DAVID E. BEDELL, OF NEWARK, NEW JERSEY.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 314,782, dated March 31, 1885.

Application filed December 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. BEDELL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sash-Fasteners; and I do hereby 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide an automatically-acting catch or holding device for windows, also adapted to act as a fastening or locking device for the same; and it consists of a rotating plate arranged in a frame or casing secured in or upon the window-casing, or in or upon the sash-frame, adapted to engage with teeth or stops upon either the sash or casing, as described hereinafter, and a spring or equivalent mechanism operating to cause the said rotating plate to engage with the teeth or stops.

In the accompanying drawings, in which my invention is illustrated, Figure 1 is an elevation of a portion of the window-casing and the lower sash, partly in section, showing an arrangement of my catch, &c. Fig. 2 is a view similar to Fig. 1, but with half of the mortise-casing removed, said figure showing the operation of the finger-piece and bolt upon the angular plate. Fig. 3 is an elevation of a portion of a car-window and window-casing having my catching mechanism thereon. Fig. 4 is an enlarged view of the fastening shown in Fig. 3, with the top or face of the casing broken away, showing the operation of the angular plate under certain conditions, described hereinafter. Fig. 5 is a sectional view showing one form of construction of a car-window fastening with the recess in the under plate for the finger mechanism. Fig. 6 is a view of back or under side of the casing, &c., shown in Fig. 5. Fig. 7 is a side elevation of a skeleton frame, &c.; and Fig. 8 is a back view of Fig. 7.

The catching or holding plate A, as indicated in the drawings, is provided with journals *a*, and arranged in a slotted casing or frame, B, the journals moving in the slots in said casing or frame. The preferred form of

the plate A is square; but it may be circular, with catching-points upon its sides or periphery, or polygonal, or any desired form, the intention being to provide a plate or catch adapted to rotate, having projections or corners to engage with and catch upon teeth or stops suitably placed so as to hold the window or sash in any desired position. The form which gives the best results, both in regard to effective operation and cheapness of construction, is a square plate, the four corners of which, as shown in the drawings, Fig. 4, catch upon the teeth in the serrated plate C and hold the sash at the height desired.

To bring the rotating piece A into holding-engagement with the serrated piece, I employ a spring, D, so arranged as to cause the said piece A to exert a constant pressure against the said serrated piece, the force of the pressure depending upon the strength of the spring, which varies with the weight of the window.

In Fig. 1 is shown an arrangement and construction adapted for ordinary house-window sashes. In this instance the rotating piece or plate A is arranged in a slotted casing mortised in the side frame of the windows, the spring being arranged between the said plate A and the back of the casing B, as indicated in Fig. 2. Fig. 3 shows the device as arranged upon the window or sash, as in a car-window, the form and arrangement of the casing being changed to meet the different conditions which will be described below, the arrangement of the spring, as indicated in Fig. 4, being similar to that in the mortised casing.

Illustrated in Fig. 7 is a skeleton casing or frame, which may be mortised in the usual manner, consisting of the face-plate E, provided with an aperture through which the rotating plate moves, and having slotted plates *d*, within which the journals of the rotating plate work, and a spring, *d'*, engaging with the rotating plate, said spring being secured to the face-plate by riveting, or perforated to receive the lug *d''*, and held in place by a pin, *d'''*, or in any suitable manner. This last form—viz., the skeleton frame, &c.—is of the most simple construction and very cheaply made, and hence is adapted for general use.

As a simple catch, the device operates in the following manner: Upon a car-window the serrated piece C is preferably placed, as in Fig. 3,

upon the side of the window-casing, the catch, &c., being upon the window-sash S, the teeth *c* of the serrated edge being cut so as to permit the rotating plate A to slide up against the inclined sides *c'* as the sash is raised, but prevents the sash from dropping by the plate A engaging with the short straight sides of the teeth. To lower the sash the application of a certain amount of power will cause the plate to turn, as indicated in Fig. 4, thereby clearing the tooth with which it engages, and the pressure of the spring causes it to spring automatically into the notch below. To lower the sash entirely causes a succession of revolutions in the plate, depending upon the number of teeth in the plate C. The strength of the spring in relation to the window is a little in excess of that required to hold the plate within the notches to prevent the sash falling. This surplus force is overcome by the person in lowering the window. When the serrated plate is secured to the sash and the rotating plate to the window-frame, the position of the teeth is reversed, as indicated in Fig. 1, so that plate A will catch thereupon, the action of the same being like that described above.

As thus constructed and operating, it will be seen that as a simple catch the device is perfectly automatic, needing no manipulation to operate it aside from the ordinary raising and lowering of the sash.

To employ the plate A as a fastening device, in addition to its action as a simple catch, I provide a stop or mortise, *m*, in the lower part of the serrated plate C, when the said plate is upon the window-frame, as in Fig. 8, and in the upper part of the same when upon the window-sash, as in Fig. 1. Into the mortise the rotating plate is projected by the spring and normally locks the window, as indicated in Figs. 1 and 3.

To disengage the plate A from the stop or mortise necessitates the employment of mechanism adapted for the purpose. The preferred method of constructing the said unlocking mechanism is so that it also acts as a lifting-piece in raising the sash. In Fig. 1 is shown one construction adapted for a house-window, consisting of a lever, *g*, pivoted to an escutcheon *g'*. On the inside of the sash, a bolt, *g²*, is pivoted to one end of the lever and passes through the plate C into the lower part of the mortise *m*, where it engages the lower part of the plate A, as indicated in Fig. 1. The rotating plate is disengaged from the mortise by lifting the lever, which presses the bolt against the lower part of the plate A until said plate clears the lower corner of the mortise, as indicated in Fig. 2, when the sash can be raised.

To apply the unlocking mechanism upon the upper sash necessitates a reversal of the finger-lever, as in that case the sash descends. Upon ear-windows the unlocking mechanism is preferably arranged on the casing of the rotating plate, and so constructed that

the act of lifting the sash by the finger-lever and the ordinary fixed lifting-handle withdraws the rotating plate from the mortise. 70

In the form shown in Fig. 5 the casing consists of two plates, *h h'*, the under one of which, *h'*, is so formed as to provide a recess within which the finger-piece, &c., is arranged, the unlocking mechanism consisting of said finger-piece *i*, pivoted to the under plate, *h'*, and a slotted piece, *i'*, which engages with one of the journals of the rotating plate. 75

I do not wish to be understood as limiting myself to either of the devices for operating the catch or rotating plate, as equivalent means acting by gravity, &c., may be used therefor. The constant action of the rotating plate upon the spring causes it to become worn at the central portion thereof, and consequently weakened. To prevent this I may use a supplemental plate, *p*, interposed between the rotating plate and spring, as illustrated in Fig. 2, attached to a post, or otherwise secured. 80 85 90

Arranged and constructed as above described, the plate can automatically adjust itself to the notches and mortise in the serrated plate, sliding from catch to catch in its ascent, and rotating and springing into each notch as it descends, and finally engaging with the mortise when the sash reaches its closed position. 95

Having thus described my invention, what I claim as new is— 100

1. A sash holding or fastening device provided with a rotating plate arranged within a slotted frame or casing, and adapted to engage with stops suitably placed to lock or hold the sash, said plate having journals moving in the slots in said frame or casing, and a spring arranged and operating to cause said rotating plate to engage with said stops, substantially as and for the purpose set forth. 105

2. The combination, in a sash holding or fastening device, with a rotating plate arranged within a suitable casing, a spring, and stops or holding devices, of a pivoted lever or finger-piece, and a bolt or equivalent device arranged and operating substantially as and for the purpose set forth. 110 115

3. In a sash holding or fastening device, in combination, a square rotating plate arranged in a slotted casing, and provided with journals moving in said slots in the casing, a stop-plate provided with a mortise and stops therein, a spring arranged in connection with the casing to cause the square rotating plate to engage with the stop-plate, and mechanism, substantially as specified, whereby the said rotating plate is disengaged from locking-engagement with the stop-plate, for the purposes set forth. 120 125

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of November, 1884. 130

Witnesses: DAVID E. BEDELL.
FREDK. F. CAMPBELL,
CHARLES H. PELL.