





## UNITED STATES PATENT OFFICE.

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## HOLDER FOR WINDOW-SASHES.

SPECIFICATION forming part of Letters Patent No. 788,182, dated April 25, 1905.

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*To all whom it may concern:*

Be it known that I, EDWARD GARLAND ABELL, a subject of the King of Great Britain and Ireland, and a resident of 159 Queen street, Brisbane, in the State of Queensland, Commonwealth of Australia, have invented a certain new and useful Improved Holder for Window-Sashes, of which the following is a specification.

10 The object of this invention is to provide an improved means for adjusting the sashes of a window in their frame, and has more specifically the object of simultaneously adjusting both the upper and lower sash by the raising  
15 and lowering of either.

A further object of this invention is to provide a window in which instead of being adjusted by a positive vertical movement the window-sashes are placed in angular or inclined positions.

20 With the foregoing and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

25 In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts throughout the several views, in which—

30 Figure 1 is a vertical section through the window-frame, showing the invention in applied position. Fig. 2 is a fragmentary plan view of the sashes, the window-frame being in section. Fig. 3 is an end elevation of the invention detached.

35 In the drawings,  $e$  represents the meeting-rails of a pair of sashes,  $e'$  top rail of the top sash, and  $e''$  the bottom rail of the bottom sash.

40  $f$  is the stile of the top sash, and  $f'$  is the stile of the bottom sash.

$f''$  is sill of the window, and  $g$  is the head thereof.

45  $h$  is the jamb of the window, and  $h'$  is the parting-strip secured to the jamb for separating the two sashes. In the window-jamb are two grooves  $g^3$  and  $g^4$ , one on either side of the parting-strip, extending longitudinally  
50 of the jamb. Secured to the top and bottom,

respectively, of the stiles  $f$  and  $f'$  are plates  $i$  and  $i'$ , from which project pins  $g'$  and  $g''$ , engaging and adapted to ride in the grooves  $g^3$  and  $g^4$  of the jamb. Said pins are provided with antifriction-rollers  $k$ . 55

$a$  and  $a'$  are two levers pivotally connected by a pin  $b^3$ , working in a plate  $c$ , fixed to the window-jamb.

$d$  is a fixed collar on the pivot-pin positioned between the plate  $c$  and the levers  $a$  60 and  $a'$ .

$e^3$  is a nut on the end of the pin  $b^3$ . When the nut  $e^3$  is screwed tight up against the levers, they are jammed tightly between the nut and the collar  $d$  and act as a single lever, 65 and the sashes operate simultaneously; but when the nut is loosened the levers have independent movement, and consequently the sashes can be moved independently of each other. The fact that the collar  $d$  is fixed on 70 the pin  $b^3$  prevents the collar  $d$  from binding against the plate  $c$  when the nut  $e^3$  is tightened, and thereby interfere with the rotation of the pin  $b^3$ .

The levers  $a$   $a'$  are provided on their outer 75 ends with eyes  $a^2$   $a^3$ . Pivotal secured to the eye  $a^2$  is an arm  $b$ . Said arm is provided at one end with an eye  $b'$ , which registers with the eye  $a^2$  and through which passes the pivotal pin  $b^2$ . Said arm is adapted to be secured to the sash, preferably by means of a screw 1, which passes through the aperture 2 near the free end of the arm  $b$ . Pivotal secured to the eye  $a^3$  by means of the pin 3 is the eyebolt 4, which has its lower portion 5 85 threaded to receive the nut 6. The bolt 5 is adapted to be secured to the bottom sash.

By the arrangement of parts as above set forth the sashes may be raised independently of one another or simultaneously, which operation is governed by the nut  $e^3$ . When it is desired to operate the sashes simultaneously, upon raising the lower sash the pins  $g^2$  will ride in the groove  $g^4$  and the top will swing inwardly, which movement will cause 95 the top sash to lower, the pins  $g'$  riding in the groove  $g^3$ . The top sash swings in an opposite direction to the movement of the lower sash. The simultaneous movement of the two sashes is caused by the tightening of the nut 100



$e^3$ , as will be readily understood. The sashes counterbalance, and thereby hold each other in their varying positions. The remaining details of operation are thought to be obvious  
5 to those skilled in the art.

The pivotal point of the lever need not always be fixed centrally between the meeting-rails, but may be affixed to the jamb either above or below the center of said meeting-  
10 rails.

The stiles of the sashes carry strips or beads which overlap the sides of the window in order to make the window air-tight and dust-proof. As shown in the drawings, the free portions  
15 of the strips fit within grooves  $z$  in the frame.

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

1. In combination, a window-frame, sashes  
20 therefor, a pin rotatably secured thereto, levers pivoted to the pin and movable independently of each other, the ends of the levers terminating in eyes, means for holding the levers on said pin, and for preventing said in-  
25 dependent movement and pivotal connections between the eyes of the levers and the window-sashes.

2. In combination, a window-frame, sashes therefor, a pin rotatably secured thereto, le-  
30 vers pivoted thereto and movable independently of each other, the ends of said levers

terminating in eyes, means for holding the levers on said pin and for preventing said independent movement, an arm pivotally secured to an eye of one of the levers, and an  
35 eyebolt pivotally secured to the eye of the remaining lever, said arm and eyebolt being secured to the upper and lower sash of the window-frame respectively.

3. In combination, a window-frame, sashes  
40 therefor, a pin movably secured to the frame, levers pivoted to the pin and movable independently of each other, and means for holding the levers on said pin and for preventing  
45 said independent movement, the ends of said levers being pivotally secured to the sashes, as and for the purpose set forth.

4. In combination, a window-frame having a parting-strip, sashes therefor, a plate secured to the parting-strip of the frame, a pin  
50 held by the plate, said pin being free to rotate, a fixed plate on the pin, an adjustable nut on the pin and levers pivoted at one end to the pin between the fixed plate and nut,  
55 the opposite ends being pivotally secured to the sashes, as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EDWARD GARLAND ABELL.

Witnesses:

J. E. A. SHORTER,  
W. J. WEATHERILL.