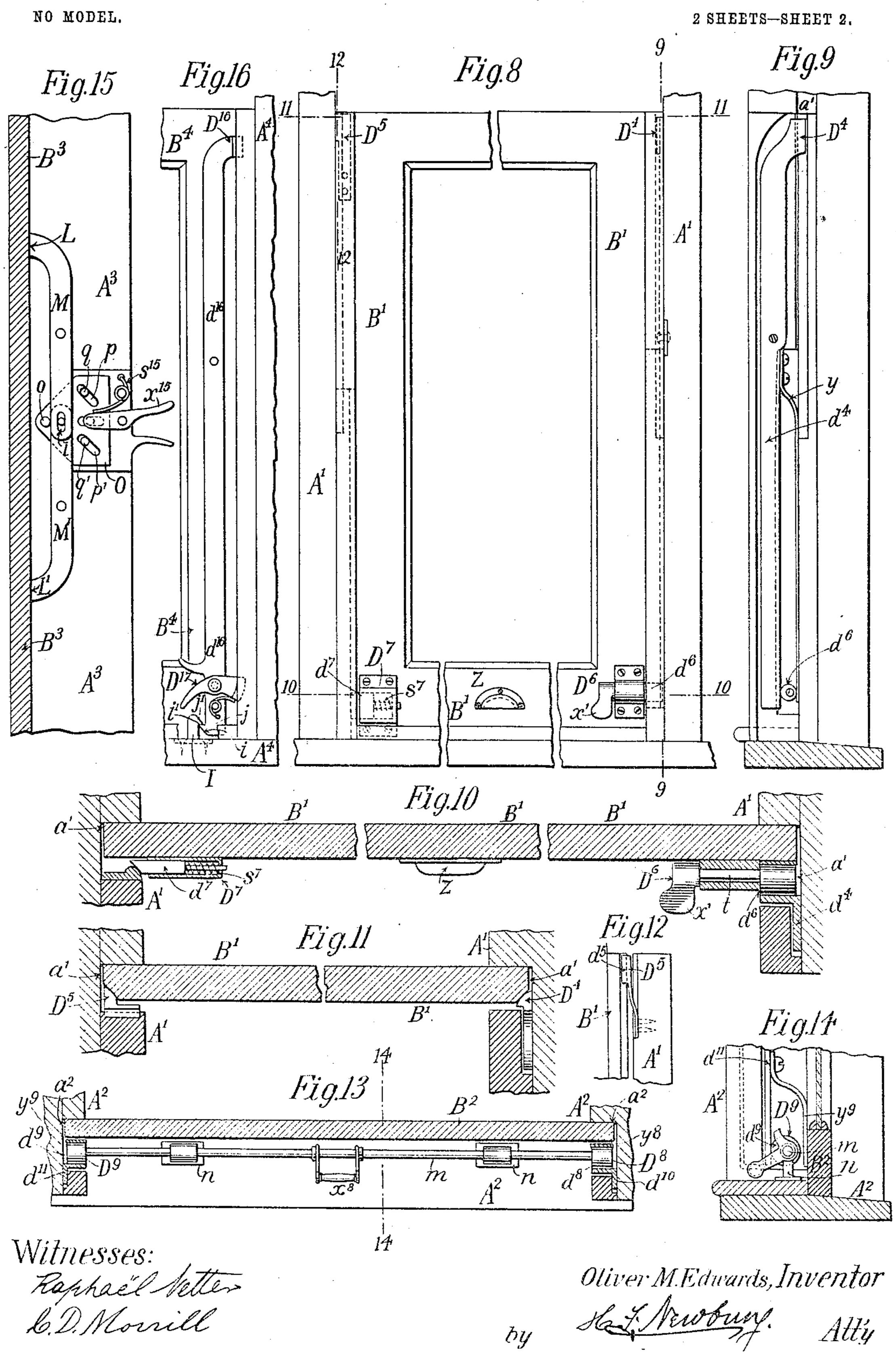
O. M. EDWARDS. WINDOW.

APPLICATION FILED JAN. 16, 1903. 2 SHEETS—SHEET 1. Fig. 2 NO MODEL. dרח $f_{F,1}$ Fig.3 All the transfer of the transf Witnesses: Raphael better 6D Morrill Inventor Oliver M.Edwards

O. M. EDWARDS. WINDOW.

APPLICATION FILED JAN. 16, 1903.



United States Patent Office.

OLIVER M. EDWARDS, OF SYRACUSE, NEW YORK.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 768,935, dated August 30, 1904.

Application filed January 16, 1903. Serial No. 139,287. (No model.)

To all whom it may concern:

Be it known that I, OLIVER M. EDWARDS, a citizen of the United States, residing at Syracuse, in the county of Onondaga, State of New York, have invented a certain new and useful Improvement in Windows, (Case A.) of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to devices by which the sashes of windows may be held in close relation to the guideways in which they move, means for actuating some one or more of such devices, and means for locking the sash in desired positions in its guideway.

One object of my invention is to provide a window with devices simple in construction and easy to apply and which tend to normally hold the sash in its guideway at different points thereof.

Another object is to provide a window with holding devices so arranged relatively to the sash and its guideway that a portion of such devices are mounted to bear against the sash in a fixed relation to its guideway and another portion are mounted to bear in a fixed relation to the sash.

Another object is to provide a window with devices a portion of which are mounted to bear against one portion of the sash and another portion are mounted to bear against another portion and with connecting means between such portions arranged to cause such devices to bear against the sash at different points thereof upon the movement of one of such devices or a movable part connected therewith.

Another object is to provide a window with a pivotally-mounted device or devices having a lever, if desired, as a part of the same by which such device or devices may bear against the sash at different points.

Another object is to provide locking-detents in connection with a holding device, so that the release of the sash from the holding action of one or more of the holding devices and the detents may be made to take place by the same or connecting actuating means.

Other objects will appear from the descrip- | line 9 9 of Fig. 8 as seen from the right. Fig. 5° tions hereinafter given; and my invention con- | 10 is a horizontal section on line 10 10 of Fig. 100

sists in the combinations of parts or devices hereinafter set forth, and particularly pointed out in the claims, which form a part of this specification.

I have shown in the drawings different em- 55 bodiments of my invention; but it is to be understood that it may take on other forms or embodiments than those here shown.

Like letters of reference whenever they occur indicate corresponding parts in the several 60 figures of the drawings.

The accompanying two sheets of drawings illustrate certain forms in which my invention may be carried out.

Figure 1 is a front view of a window con- 65 taining one embodiment of my invention as applied to a car-window as seen from the interior of the car and with the holding devices partly attached to the sash and partly to the frame of the window. Only so much of the 70 window is shown as is thought necessary to illustrate the attachment of the holding devices thereto and the manner of combining the same with the sash and frame composing the window. Fig. 2 is a vertical section on line 75 2 2 of Fig. 1 as seen from the right. Fig. 2^a shows a slight modification in the form of a part seen in Fig. 2. Fig. 3 is a horizontal section on line 3 3 of Fig. 1, showing the wedging action of connected devices one upon 80 the other. Fig. 4 is a horizontal section on line 44 of Fig. 1, showing the upper left portion of the sash and the holding device bearing thereon. Fig. 5 is a horizontal section on line 5 5 of Fig. 1, showing one manner of 85 pivoting one of the devices to the frame of the window. Fig. 6 is an enlarged front view of one of the holding devices seen attached to the sash in preceding figures with the front portion of the casing over the movable parts 90 thereof removed. Fig. 7 is an edge view of the device seen in Fig. 6 when looking from the right. Fig. 8 shows in front view another form of pivotally-mounted holding device combined with other holding devices in a win- 95 dow somewhat differently from what is shown in some of the preceding figures with portions broken away. Fig. 9 is a vertical section on line 9 9 of Fig. 8 as seen from the right. Fig.

8, showing the lower right-hand holding device in plan view, with the casing in which it is mounted in cross-section, and this figure also shows the manner in which the lower 5 holding devices coöperate with connected parts to hold the sash in its guideway. Fig. 11 shows in horizontal section on line 11 11 of Fig. 8 the manner in which the upper holding devices cooperate with connected parts to hold the sash in the guideway, the holding devices being seen from above or in plan view. Fig. 12 shows in vertical section on line 12 12 of Fig. 8 the upper left-hand holding device spring-mounted on the frame as the same is 15 seen from the left. Fig. 13 shows in horizontal section a modified construction and arrangement of holding devices for the lower part of the window so connected together that they may be operated by a single hand 20 of the operator and to substantially the same extent by one operating-handle. Fig. 14 is a cross-section on line 14 14 of Fig. 13 as seen from the right. Fig. 15 shows another form or embodiment of a pivotally-mounted hold-25 ing device, which, as shown, is mounted on the frame to engage with the sash at two points, with means for actuating the pivotally-mounted bearing or holding devices by one hand of the operator. Fig. 16 shows in front eleva-3° tion a portion of a window having another form of pivotally-mounted holding device, which is mounted upon the sash and moves therewith, and locking means.

In Figs. 1 to 7 is shown one embodiment of 35 my invention, wherein A is the window-frame; B the sash, having the glass C. The frame A is provided with a guideway a, in which the sash may move in the opening and closing directions. At each side of the window there is 4° arranged a pivotally-mounted holding device adapted to bear against the sash near its upper part and which extends, as here shown, to nearly the bottom part thereof in position to engage with the movable part of a second and 45 somewhat different form of holding device. These holding devices may be substantially alike, but adapted to be secured to opposite sides of the window. The pivotally-mounted device D bears against the upper right-hand 5° portion of the sash, and the device D' bears against the upper left portion thereof. Device D has a lever portion d, which, as shown, may be pivotally attached to frame A, as clearly seen in Fig. 5, and extend downwardly, so as 55 to be in position to permit the movoble part d² of holding device D², secured to the lower right-hand portion of the sash B, to engage therewith and move such lower portion of the lever outwardly or away from the sash and at 60 the same time press that portion of the sash toward that portion of its guideway farthest away from the lever, as seen in Figs. 2 and 3. The movable part d^2 of holding device D^2 is, as shown, made wedge shape at the portion 65 thereof which engages with the lower portion

of lever d, and this portion of the lever may also be somewhat wedge shape, if desired, as shown in Fig. 2^a. Holding device D' has its pivoted lever d' secured to the opposite side of the window in a manner similar to that in 70 which lever d of device D is secured, and its lever d' extends so as to engage with the movable part d^3 of holding device D³, mounted on the sash at the lower left portion as device D² is mounted at the opposite lower portion 75 thereof, the action of one device upon the pivotally-mounted device with which it engages being the same as is the case with the other. The portions of the sash and frame here shown may form a portion of a window of a 80 railway-car or other structure, and also there may be added to these portions counterbalancing or automatic raising means for the sash, if desired, such devices being quite common in car-windows at the present time, and for 85 this reason need not be here shown.

The manner in which holding devices D and D' bear against the upper portions of the sash as the same are seen in Fig. 1 is clearly seen in Fig. 4, which is a view on line 4 4 at the 90 upper left portion of Fig. 1 and substantially illustrates the manner of both devices.

Holding device D² is seen on an enlarged scale in Figs. 6 and 7, where the casing in front is largely removed. Movable part or 95 holding-bolt d^2 is pivotally mounted on the casing and is provided with an actuating part x, by which it may be moved on its pivot into or out of holding position relatively to the lower portion of lever d as seen in 100 Figs. 1 and 2. A spring s is arranged to exert its stress upon d^2 in a direction to move it into holding position and which has to be overcome when such part d^2 is moved out of such position. A finger or thumb piece, as 105 shown, may be fixed to the casing in position to be grasped when actuating x to release the sash from the holding action of devices D³ and D². Holding device D³, as before explained, is or may be similar to device D2, 110 and its action and mode of operation may also be similar, as also its construction as the same is indicated in these figures. As here shown, devices D and D' are so arranged relatively to the sash and guideway that they bear 115 upon the sash in a fixed relation to the guideway, and devices D² and D³ are similarly arranged, so as to bear against the sash in a fixed relation thereto. A lever portion d of holding device D forms a connecting means 120 between such device and holding device D², one of which bears against the sash at one portion or point, and the other bears at another and different portion or point thereof, and devices D² and D³ cause devices D and D' 125 to thus bear upon the sash at the same time they themselves bear against such sash. The lever portions d and d' not only cause devices D and D' to bear against the sash, but they also cause devices D² and D³, respectively, to 13° bear against the sash at different points from what devices D and D' bear.

If desired, a locking-detent may be combined with one of the movable parts d^2 or d^3 , 5 as shown in connection with d^2 in Figs. 1, 6, and 7. As here seen, an elbow-lever u is pivotally attached to the casing of D³, so that one end of such lever will be moved downward as d^2 has its holding end moved down-10 wardly, which will move its other end, carrying the detent v, out from underneath the abutting surface w, attached to the lower portion of the frame of the window, when the window-sash may be moved in an upwardly | 15 direction, with locking-detent v held by uaway from surface w, as seen in dotted lines, when d^2 is moved from the position seen in Fig. 6. This elbow-lever u is free to swing on its pivot and will fall by gravity into the 20 locking position and will be moved by contact with the inclined surface opposite to surface w when the sash is moved into the closed position. With sash of larger size the levers d and d' may spring too much if not made of 25 sufficiently large material. If desired, the spring of that portion of these levers adjacent to the holding devices D² and D³ may be limited to a degree by a stop device, as E. (Seen in Figs. 1 and 2.) As here shown, the lower 30 ends of such levers are notched, as at e, and a part, as e', with a projection f, made to engage with notch e and limit the movement of this portion of the lever beyond the point it is desired to move. The notch e permits the 35 desired movement of levers d and d'.

Figs. 8, 9, 10, 11, and 12 show another embodiment of my invention, wherein one holding device is pivotally mounted to the frame of the window, and different holding devices 4° from those heretofore shown are employed in connection therewith to bear against the sash at different points thereof. A' is the frame of the window, in which a guideway a' is formed for the sash B' to move. The holding 45 device D⁴ is provided with an inclined or beveled bearing-surface to coact with a similar surface, or one adapted to coact with that on D⁴, on the edge of the sash, as seen at the right in Fig. 11, by which the bearing-sur-5° face on D⁴ may tend to move the sash both edgewise and sidewise relatively to its guideway, as D⁴ is moved into holding position by rocking on the pivot by which the lever portion d^4 of device D^4 is attached to the frame 55 of the window in a manner somewhat similar to that in case of devices D and D', heretofore described. The lower part of this lever portion d^* is provided with a flat surface, as seen at the right of Figs. 3 and 10, against which 60 an eccentric or cam-shaped part d⁶ may engage and force the same away from the sash. As before explained, a spring y may be attached, so as to embrace the cam or eccentric d^6 of holding device D^6 , to the lever portion d^4 65 near its pivotal connection to the frame of the

window, as seen in Fig. 9, and with its stress to press such lever portion toward cam d^6 , such cam sliding between the spring y and lever d^4 as the sash moves up and down in its guideway. The distance between the point 70 where spring y is attached to lever d^4 and the cam or eccentric d^6 when the window is closed is sufficient to permit of the window being opened to the desired extent. Holding device D⁶ is seen in Fig. 10 with its casing partly 75 removed and consists of a shaft t, rotatively mounted in the casing and bearing at one end the cam or eccentric d^6 , which is secured thereto, so as to rotate as the shaft rotates. Upon the other end of this shaft t a handle 80 portion x' is attached, by which such shaft can be rotated to force the lower end of lever d^4 away from the sash and at the same time force the sash in the opposite direction and against that portion of the guideway far- 85 thest from such lever, as shown at the right of Fig. 10. Holding device D⁵ consists of a movable part d^5 , spring-connected to the frame of the window, as indicated in the left upper portion of Fig. 8 and as seen in cross-section 90 at the left of Fig. 11. This part d^5 is provided with a beveled bearing-surface which is adapted to coact with a similar surface on the sash or one adapted to coact therewith and which tends to give this portion of the sash 95 both an edgewise and sidewise movement in the frame after the manner set forth in Letters Patent No. 562,935, granted to me upon the application of John E. Sweet, June 30, 1896, when such part is forced against the 100 sash by the stress of its spring by which it is mounted upon the frame of the window. Holding device D⁷ consists, as here shown, of a casing in which a sliding part or bolt d^7 is mounted to slide back and forth in a direction 105 transverse to that in which the sash moves in opening and closing the window. This part d^7 is provided with a spring, as s^7 , (seen in dotted lines,) whose stress tends to force d^{τ} toward the frame of the window and against 110 a coacting bearing-surface formed thereon. Part d^7 is provided with a beveled bearing-surface, as seen in Fig. 10, at the left thereof, which is adapted to bear and coact with a bearing-surface formed on the frame, 115 such as shown in Fig. 10, at the left thereof, or with any other form of surface with which the surface on d^7 may coact in a manner to give the character of movement set forth in the above-named Letters Patent and also as 120 heretofore explained. The sash may be provided near its lower central portion with a hand or finger piece Z, by which it may be lowered and raised, as indicated in Figs. 8 and 10.

In Fig. 13 a modification in construction and arrangement of the pivotally-mounted holding devices is shown the sash being in cross-section and only the lower part of the window being seen, the upper portions of the 130

125

holding devices being such as seen in Figs. 1 to 7 or of any other desired construction—as, for instance, at the right of Fig. 8. The frame A² is provided with a guideway a², in which the sash B² may move in opening and

closing the window.

In Fig. 14 that portion of the window and of the devices seen at the left of Fig. 13 are shown as seen when looking from the right. To The holding devices D⁸ and D⁹ are mounted upon the frame of the window on that portion commonly called the "sill" and are connected with a shaft or rod m, mounted in bearings n n, secured to the sill and in which 15 such rod or shaft may rotate, a handle x^8 being provided for this purpose. The rocking of this shaft or rod m causes movable parts or cams d^8 and d^9 to correspondingly rock, and as such cams or eccentrics are rocked they 20 force the lower ends of levers d^{10} and d^{11} inward or outward relatively to the sash, accoordingly as the springs y^8 and y^9 are to be forced with increased pressure against the sash or not. The forcing of the springs y^s 25 and y^9 against the sash with increased pressure tends to force those portions of the holding devices with which levers d^{10} and d^{11} are provided and which are to bear against the sash with increased pressure the same as in 30 preceding figures.

Fig. 15 shows another embodiment of my invention, wherein the device bears against the sash B³ at different points, and the parts which do this are pivotally mounted upon the 35 frame A³ of the window. The pivoted levers M and M' are pivoted to the frame A³, as shown, and lever M bears at L upon the sash B, and lever M' bears at L' upon a different portion of such sash. The levers are shown 40 as being connected together by pin-and-slot connection at l. The actuating means are also mounted upon the frame A³ and consist of a movable part O, provided with an abutment or projection o, which is arranged to 45 bear against one or both levers at the edge thereof nearest the sash B³. This part O and

thereof nearest the sash B³. This part O and projection o are so mounted by inclined slots p and p' and studs q and q' that as part O is forced downwardly such part moves away from sash B³, carrying or forcing levers M and M' to correspondingly move at the point where projection o engages therewith, thus causing the levers at L and L' to bear against the sash. A lever x¹⁵ is provided, which is made to engage with part O at one end and is

pivoted to the frame between its ends, so that as its free end is moved upwardly it forces part O downwardly, and when such end is moved downwardly, as it may be by the hand of the operator, part O is moved upwardly.

of the operator, part O is moved upwardly, so as to release the sash from the holding action of levers M M'. A spring s^{15} tends to force part O downwardly by exerting its stress upon lever x^{15} , as shown.

In Fig. 16 another embodiment of my in-

vention is shown, wherein a sash B4 may be made to move in a suitable guideway formed in the frame A4, (only a portion of which is shown,) and a pivotally-mounted holding device D¹⁶ is pivoted to sash B⁴, as shown. De- 70 vice D¹⁶ bears against the sash near its top portion by wedging in between a portion of the guideway and the sash in somewhat the manner shown in some of the preceding figures—as, for instance, the holding device D⁷ 75 in Figs. 8 and 10. At the lower end of the lever d¹⁶ of device D¹⁶ a second device D¹⁷ is pivotally mounted, which bears against the sash at this point as this device D¹⁷ is wedged in between a portion of the guideway and the 80 sash in a manner similar to that in which movable part d^2 of holding device D^2 in Figs. 1 to 7 is wedged in, as clearly seen in Fig. 3. The lower portion of this lever d^{16} , to which device D¹⁷ is mounted, may be provided with 85 a suitable finger or thumb piece, as shown, to aid in manipulating device D¹⁷. If desired, the lower portion of the lever d^{16} may be extended and a projection formed thereon, as shown, which may engage with the abutting 90 surface i of the part I, fixedly secured to the frame of the window, and thereby serve as a locking-detent to hold the sash positively locked when the holding device D¹⁷ is in holding position. The projection i may be moved 95 out of locking position by moving this end of the lever toward the guideway. The part I may also serve as limiting means by which the movement of the lever away from the guideway may be limited through the part of 100 lever d^{16} coming in contact with the part j' of I, as shown.

Levers M and M' in Fig. 15, as do other constructions shown, form devices which are mounted to bear against one portion of the 105 sash at one point and against another portion of the sash at another point, and they also form connecting means between the portions bearing against one part of the sash and those bearing against another part of such sash, 110 which are arranged to cause such devices to bear against the sash at different points thereof upon the movement of one of such devices or of a movable part connected therewith. They also form a pivotally-mounted device or 115 devices having a lever as a part of the same by which such device or devices may bear against the sash at different points.

The constructions shown form a sash-holding device consisting of two members, one of 120 which is pivotally mounted in holding relation to one portion of the sash and the other is provided with a movable part adapted to engage with the pivotally-mounted member and to be mounted in holding relation to another portion of the sash, and the movement of one causes the other to move and exert a holding action on the sash at different points.

I have herein shown different forms or embodiments of my invention; but I wish it to 130

be understood that it may take on other forms or embodiments, and therefore do not desire to be limited to those shown and described, and wish to include all those having substan-5 tially the same principle or mode of operation of those herein set forth.

What I claim as new, and desire to secure

by Letters Patent, is—

1. In a window the combination substanto tially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device pivotally mounted on the window-frame adjacent to the guideway and to bear upon one portion of the sash, and also to engage with 15 the movable part of another device, a second holding device mounted upon the sash and provided with a movable part adapted to engage with a portion of the pivotally-mounted device and to bring pressure against the sash 20 and at the same time cause both devices to increase their holding action upon the sash at different points thereon, as such movable part is moved in one direction.

2. In a window the combination substan-25 tially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device pivotally mounted at one point and adapted to engage with the sash at a different point and to also engage with the movable part of 3° another device at still another point, and a second holding device provided with a movable part adapted to engage with a portion of the pivotally-mounted device and to bring pressure against the sash and at the same time 35 cause such pivoted device to bear against the sash at such other point, whereby the movement of the movable part in one direction may cause both holding devices to increase their holding action upon the sash at differ-

4° ent points thereon.

3. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices adapted to bear against the sash at different 45 points, one of which is pivotally mounted in holding position relatively to the sash and another of which is mounted in position to coact with the one which is pivotally mounted, a movable part which is movable rela-5° tively to the pivotally-mounted device, and actuating means for such movable part, whereby the sash is held at different points by the holding action of the pivotally-mounted part when the movable part is moved into holding 55 position by the actuating means connected with such part.

4. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices 60 adapted to bear on the sash at different points one of which devices is provided with a lever, and another device provided with a movable part adapted to cause such lever to move and cause both devices to bear against the

sash at different points, and means connected 65 with such movable part by which it may be actuated into and out of holding position.

5. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device 70 consisting of two members, one of which is pivotally mounted in holding relation to one portion of the sash, the other member being provided with a movable part adapted to engage with the pivotally-mounted member and 75 to be mounted in holding relation to another portion of the sash, and actuating means for the movable part, whereby the movement of the actuating means in one direction causes both members to lessen their holding action 80

upon the sash.

6. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device pivotally mounted at one point and adapted to 85 engage with the sash at a different point and to also engage with the movable part of another device at still another point, a second holding device provided with a movable part adapted to engage with a portion of the piv- 90 otally-mounted device and bring pressure against the sash and at the same time cause such pivoted device to bear against the sash at another point, and actuating means for such movable part, whereby the movement of the 95 movable part in one direction by the actuating means may cause both holding devices to release their holding action upon the sash at different points thereon.

7. In a window the combination, substan- 100 tially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device consisting of two members, one of which is provided with a lever, the other member being provided with a movable part adapted to en- 105 gage with such lever, the two members being mounted in holding relation to different portions of the sash, and limiting means adapted to limit the movement of the lever under the

action of the movable part.

8. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, a holding device consisting of two members, one of which is pivotally mounted in holding relation to one 115 portion of the sash, the other member being provided with a movable part adapted to engage with the pivotally-mounted member and to be mounted in holding relation to another portion of the sash, and limiting means adapt- 120 ed to limit the movement of the pivotallymounted member of the holding device upon the movement of the movable part of the other member of such device.

9. In a window the combination, substan- 125 tially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices adapted to bear against the sash at different

points, a portion of which devices are mounted to bear against one portion of the sash and another portion of such devices are mounted to bear against another portion of the sash, 5 connecting means between one portion of such devices and another portion by which the movement of a holding device bearing against one portion in the holding direction causes a movement of a holding device bearing against

10 another portion into holding position.

10. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices adapted to bear against the sash at different 15 points, a portion of which devices are mounted in a fixed relation to the guideway and another portion are mounted in a fixed relation to the sash, means connected with such devices adapted to cause them to frictionally bear 20 against the sash, and a connection between the devices bearing against one portion of the sash and those bearing against another portion by which the movement of a holding device at one point relatively to the sash will cause move-25 ments in another device and cause it to bear at another point relatively to the sash.

11. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding de-3° vices adapted to bear against the sash at different points, a portion of which devices are mounted in a fixed relation to the guideway to hold one portion of the sash therein and another portion are mounted in a fixed relation to the sash to hold another portion thereof in such guideway and means connected with the holding devices adapted to cause such devices to frictionally bear against the

sash.

12. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices adapted to bear against the sash at different points, a portion of which devices are 45 mounted to bear upon one portion of the sash and another portion of such devices are mounted to bear against another portion of the sash, connecting means between one of such devices and another one by which the 5° movement of a holding device bearing against one portion in the holding direction causes a movement of a holding device bearing against another portion into holding position, a locking-detent movable into and out of locking 55 engagement with a fixed abutting surface, and actuating means for the locking-detent.

13. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding de-60 vices adapted to bear on the sash at different points one of which devices is provided with a lever, and another is provided with a movable part adapted to cause such lever to move and cause both holding devices to bear against

the sash at different points, actuating means 65 connected with such movable part, a lockingdetent movable into locking engagement with a fixed abutting surface, and connecting means between such locking-detent and the actuating

means for such movable part.

14. In a window the combination, substantially as set forth, of a guideway, a sash adapted to move in the guideway, holding devices adapted to bear against the sash at different points, one of which devices is provided 75 with a lever, arranged in relation to different portions of the sash, and another device provided with a movable part arranged to engage with such lever and cause both devices to bear against the sash at different points, 80 and a spring connected with such movable part and arranged to move such part into engagement with such lever.

15. A sash-holding device consisting of two members, one of which is adapted to be piv- 85 otally mounted in holding relation to one portion of the sash, the other member being provided with a movable part adapted to engage with the pivotally-mounted member and to be mounted in holding relation to another por- 9° tion of the sash whereby the movement of such movable part in one direction causes both members of the device to exert a holding action on the sash and at different points thereof.

16. A sash-holding device consisting of two members, one of which is adapted to be pivotally mounted in holding relation to one portion of the sash, the other member being provided with a movable part adapted to engage 100 with the pivotally-mounted member and to be mounted in holding relation to another portion of the sash, such portions being on opposite sides of the pivot of the pivotallymounted member, whereby the movement of 105 the movable part in one direction causes both members of the device to exert a holding action on the sash and at different points thereof.

17. A sash-holding device consisting of two members, one of which is adapted to be piv- 110 otally mounted in holding relation to one portion of the sash, the other member being provided with a movable part adapted to engage with the pivotally-mounted member and to be mounted in holding relation to another por- 115 tion of the sash, which part is spring-actuated in a direction to engage with the pivotallymounted member and is provided with actuating means to move such part against the stress of its actuating-spring, whereby the move- 120 ment of the movable part by such actuating means tends to release the sash from the holding action of the device at different points thereof.

18. A sash-holding device consisting of two 125 members, one of which is adapted to be pivotally mounted in holding relation to one portion of the sash, the other member being pro-

vided with a movable part adapted to engage with the pivotally-mounted member and to be mounted in holding relation to another portion of the sash, a locking-detent adapted to engage with an abutment mounted in locking relation to the detent, and actuating means connected with such movable part and locking-detent, whereby the sash may be released

from engagement with the pivotally-mounted member and the locking action of the detent 10 when the actuating means are actuated in one direction.

OLIVER M. EDWARDS.

Witnesses:

CHAS. M. HANRAHAN, RUBY A. HUGHES.