

O. M. EDWARDS.

WINDOW.

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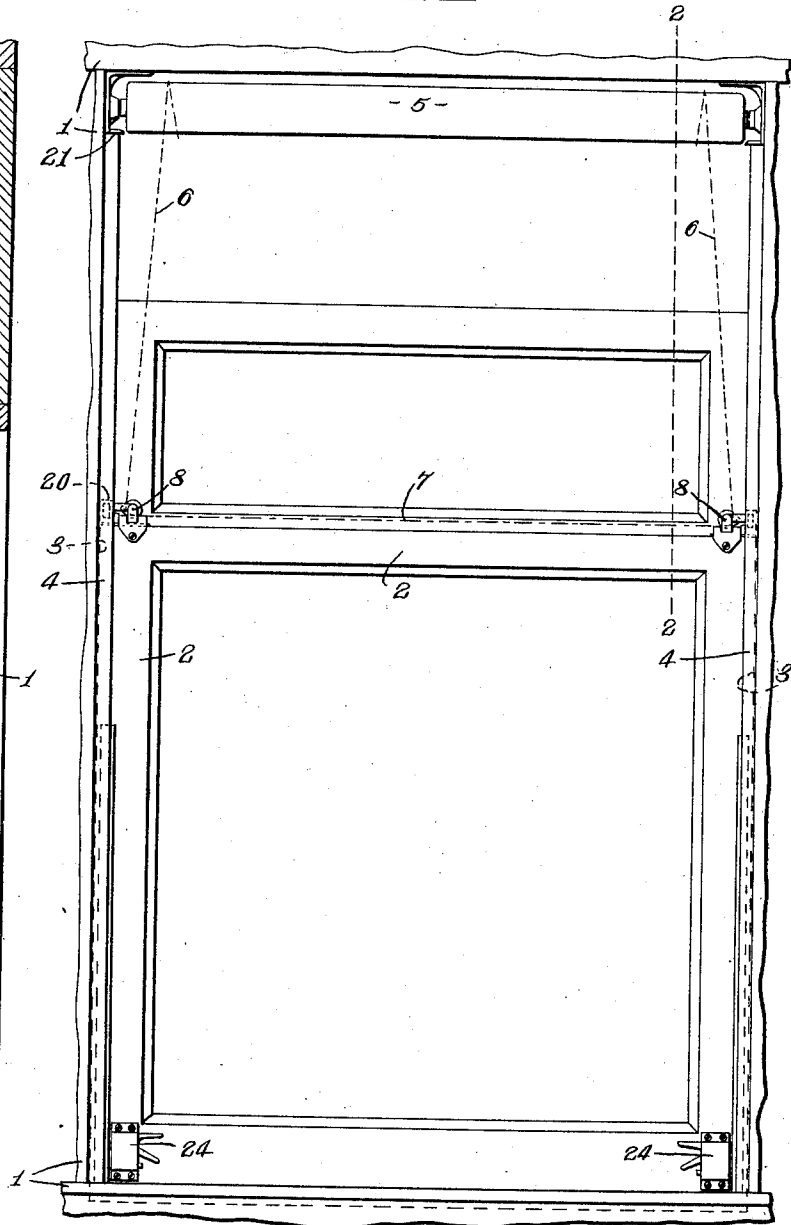
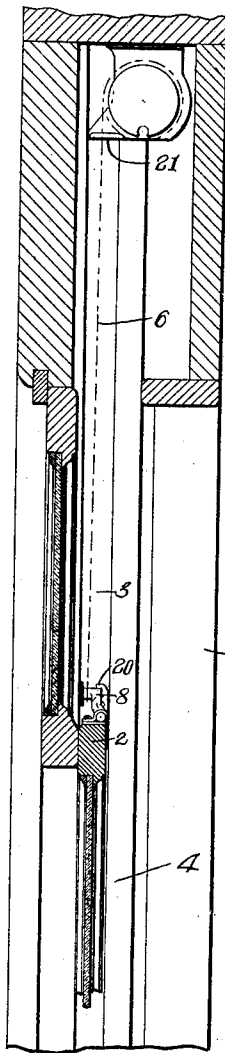
1,043,045.

Patented Oct. 29, 1912.

2 SHEETS-SHEET 1.

Fig-2-

Fig-1-



WITNESSES:

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2 SHEETS—SHEET 2.

Fig. 1 is a technical drawing showing a cross-sectional view of a mechanical assembly. The assembly is housed within a frame or container, indicated by the dashed lines and the label '1' on the right. The main component is a cylindrical or conical part, labeled '2', which is shown in cross-section with diagonal hatching. This component is mounted on a base or support, labeled '4', which is also shown in cross-section with diagonal hatching. A central shaft or rod, labeled '17', passes through the assembly. A nut or cap, labeled '18', is threaded onto the shaft. A spring or coiled wire, labeled '20', is positioned around the shaft. Other components labeled include '8', '11', '19', '10', '22', '13', '9', and '23'. The drawing is labeled 'Fig. 1' at the bottom right.

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WINDOW.

1,043,045.

Specification of Letters Patent.

Patented Oct. 29, 1912.

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To all whom it may concern:

Be it known that I, OLIVER M. EDWARDS, of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Window, of which the following is a specification.

My invention relates to windows wherein sash supporting or counterbalancing means are employed to more or less support the sash, and has for its object the production of a particularly simple, durable and efficient structure for connecting the sash to its supporting or counterbalancing means, and holding the sash more or less in the frame.

Figure 1 is an inner elevation parts being omitted of one embodiment of my invention. Fig. 2 is an enlarged sectional view on line 2-2, Fig. 1, showing parts omitted in Fig. 1. Fig. 3 is an enlarged fragmentary view of parts shown in Fig. 2. Figs. 4 and 5 are respectively opposite elevations of one of the detached holding devices, part of the means for securing said device to the sash being shown in Fig. 5.

1 is a window frame, and 2 a sash movable in guideways 3 formed in the frame 1, and 4 are stops forming the inner sides of the guideways, these parts being of any suitable form, size and construction.

5 is a spring roller supported by the frame and forming part of the sash supporting means, said means also preferably including a chain, cord or other flexible element 6 connected to the roller 5 and having an intermediate part 7 preferably detachably and slidably connected to the sash. As the roller 5 and the chain, cord or other flexible element 6 may be of any desirable form, size and construction, further description thereof is deemed unnecessary.

The sash 2 is connected to the sash supporting and counterbalancing means by devices which also tend to more or less hold the sash within the frame, these devices including rocking members 8 and pivotal means 9. Each rocking member 8 preferably consists of a substantially rectangular frame comprising arms or arm-like portions 10, 11 at its opposite sides extending in the same general direction, a pivotal portion 12 connecting corresponding ends of the arms 10, 11, a pivotal portion 13 projecting from the side edge of the arm 10 in axial alignment with the pivotal portion 12, a bar 14 connecting the other ends of the arms 10, 11, a slot 15 opening through opposite faces

of the frame and bounded by the arms 10, 11, the pivotal portion 12 and the bar 14, a second slot 16 opening through said opposite faces at one side of the slot 15 and extending lengthwise of the arm 11 between its side edges, and bounded by side and end portions of said arm 11, a shank 17 projecting laterally from the junction of the bar 14 and the arm 10 and having a head 18 at its free extremity, and a roller 19 arranged in the slot 16 and journaled in the intermediate parts of the opposite side portions of the arm 11. The upper end of the arm 11 is provided with an engaging face 20 which may coact with a suitable abutment 21 to limit the upward movement of the sash 2.

Each of the pivotal means 9 is formed with angularly extending parts suitably fixed as by screws respectively to the top edge and one of the side faces of the sash 2, and includes projections or ears 22 coacting with the pivotal portions 12, 13 of the corresponding rocking member 8, one of said ears 22 being passed through the slot 15 in said member 8. The projections or ears 22, in addition to coacting with the pivotal portions 12, 13, also coact with opposite sides of the arms 10 for limiting endwise movement of the rocking members 8 relatively to the pivotal means 9.

Preferably, a plate 23 is interposed between the top edge of the sash and the opposing overlying portions of the pivotal means 9 and forms a metallic bearing for the pivotal portions of the rocking members 8.

When the part 7 of the sash supporting means is engaged with the shanks 17 of the members 8, the spring roller 5 more or less supports the sash 2, and the rollers 19 are engaged with the frame 1 and force portions of the sash toward the opposing surfaces of the frame for more or less supporting the sash and preventing the passage of air, dust, etc., between opposing surfaces of the sash and frame.

The described construction of rocking member is particularly durable, as both ends of the arm-like portions 10, 11 thereof are united together and are thereby, especially the free ends thereof, prevented from movement or bending relatively to each other. Moreover, the shanks 17 with which the sash supporting means is detachably connected project from the juncture of the arms 10 and the bars 14 and thus a maxi-

minimum rigidity is provided at the points to which considerable strain is applied. Furthermore, the rocking members 8 are rigid and tend to transmit the strains to which they are subjected, with a minimum liability of the springing or yielding of said members or the parts thereof.

If desired, as indicated in Fig. 1, the sash 2 may be provided at one or both of the ends of the lower portion thereof, with additional sash holding means, as manually operable locks 24, but as such holding means form no part of my present invention, description thereof is deemed unnecessary.

What I claim is:—

1. The combination with a window frame, a sash movable in the frame, and means for moving the sash in the frame, of a member for connecting the sash and said moving means and for holding the sash, said member comprising a pivot or hinge pin, arms rising from the hinge pin, one arm being located at one end thereof and the hinge pin projecting beyond the other arm, the arms being spaced apart, and a rigid bar connecting the free ends of the arms, one of the arms having means for engaging the frame and holding the sash, and the other arm being provided with a projecting stud arranged at a right angle to the general plane of the member, for connection with the sash moving means, and a bearing for said member secured to the window sash, the bearing engaging the portion of the hinge pin between the arms and the projecting end portion thereof, substantially as and for the purpose described.

2. The combination with a window frame, a sash movable in the frame, and means for moving the sash in the frame, of a member for connecting the sash to the sash moving means and for engaging the frame for holding the sash, said member comprising a hinge pin, arms rising from the hinge pin at points spaced apart, one arm being located at the end of the hinge pin and overhanging the edge of the sash and the hinge pin pro-

jecting laterally beyond the other arm, the last-mentioned arm being provided with a stud extending from its free end in a direction at an angle to the general plane of said member, for engaging the sash moving means, and a bar connecting the free ends of said arms for rigidly connecting the same, and bearing means for said member comprising a part engaging the portion of the pivot pin between the arms and the laterally extending end portion of such pin, substantially as and for the purpose specified.

3. The combination with a window frame, a sash movable in the frame, and means for moving the sash in the frame, of a member for connecting the sash to the sash moving means and for engaging the frame for holding the sash, said member comprising a hinge pin, arms rising from the hinge pin at points spaced apart, one arm being located at the end of the hinge pin and overhanging the edge of the sash and the hinge pin projecting laterally beyond the other arm, the last-mentioned arm being provided with a stud extending from its free end in a direction at an angle to the general plane of said member for engaging the sash moving means, and a bar connecting the free ends of said arms for rigidly connecting the same, the overhanging arm being provided with a recess extending at a right angle to the axis of the hinge pin, an antifriction member located in the recess, and bearing means for said member comprising a part engaging the portion of the pivot pin between the arms and the laterally extending end portion of such pin, substantially as and for the purpose set forth.

In testimony whereof, I have hereunto signed my name in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 5th day of January, 1911.

OLIVER M. EDWARDS.

Witnesses:

ROY T. AXE,
RUSSELL HOTCHKISS.