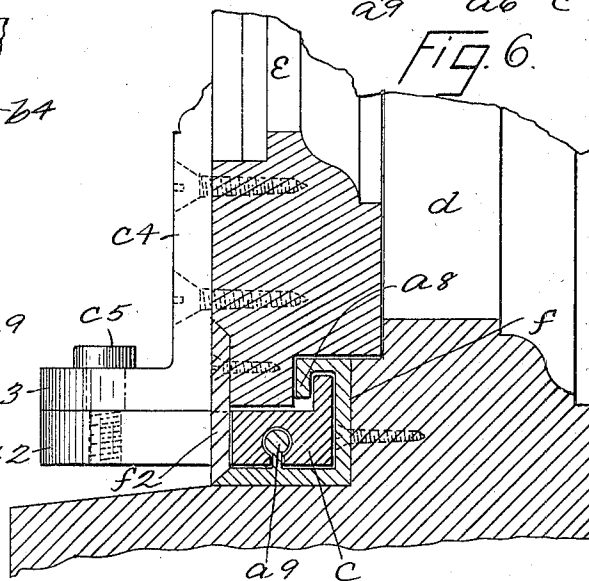
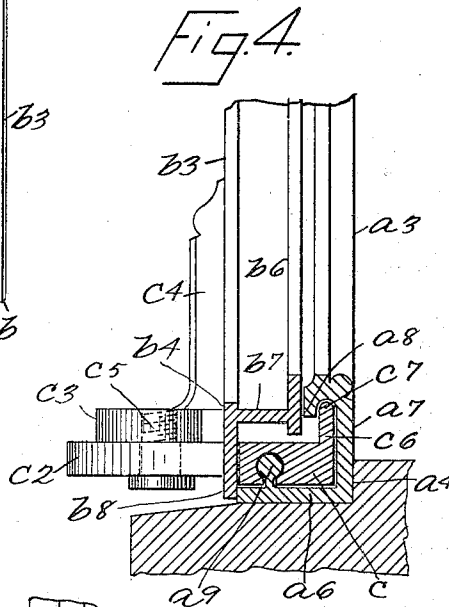
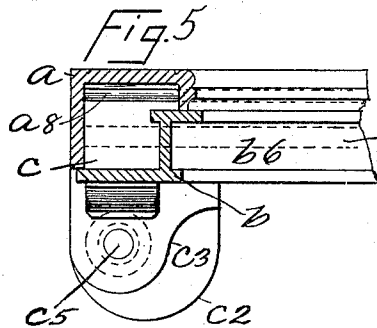
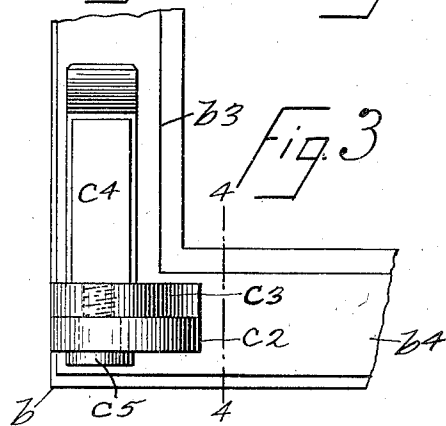
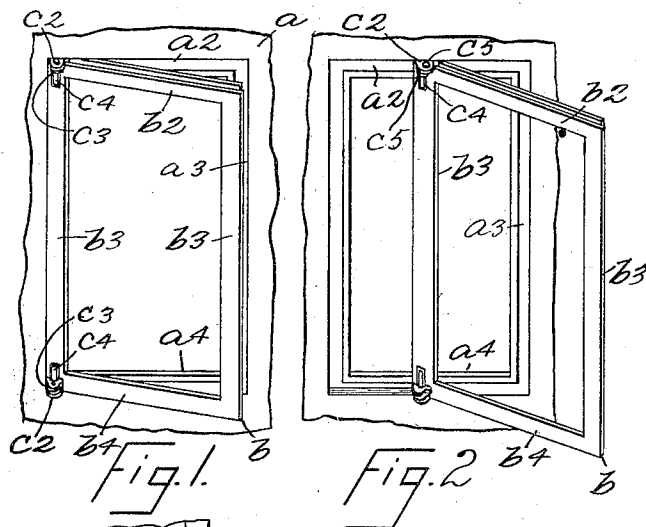


W. & A. SHRIVELL.
WINDOW FRAME AND SASH.
APPLICATION FILED SEPT. 19, 1902.

NO MODEL.



WITNESSES:

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WILLIAM SHRIVELL AND ARTHUR SHRIVELL, OF CHISWICK, ENGLAND.

WINDOW FRAME AND SASH.

SPECIFICATION forming part of Letters Patent No. 726,362, dated April 28, 1903.

Application filed September 19, 1902. Serial No. 123,970. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM SHRIVELL and ARTHUR SHRIVELL, subjects of the King of Great Britain, residing at Chiswick, in the county of Middlesex, England, have invented certain new and useful Improvements in Window Frames and Sashes, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved window frame and sash, the construction and arrangement being such that the sash may be moved transversely of the frame and turned outwardly, so as to afford access to both sides thereof for the purpose of cleaning the same and the glass therein.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of our improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is an outside view of a window frame and sash made according to our invention and showing part of the wall in which the frame is mounted, the sash being also turned outwardly slightly; Fig. 2, a similar view showing the sash moved transversely of the frame to about the middle thereof and turned outwardly; Fig. 3, an outside view of the lower left-hand corner of the window sash and frame viewed from the outside; Fig. 4, a section on the line 4 4 of Fig. 3; Fig. 5, a plan view of the construction shown in Fig. 3; and Fig. 6, a view similar to Fig. 4, but showing a modification.

In the construction shown in Figs. 1 to 5, inclusive, both the frame and sash are composed of metal, while in the construction shown in Fig. 6 the frame and sash are shown as composed of wood in the usual manner.

In the practice of our invention we provide a window-frame a , composed of a top member a^1 , two side members a^2 , and a bottom member a^4 , and the bottom member a^4 is composed of a horizontal base portion a^6 and a vertically-arranged inner side member a^7 , having an overhanging outwardly and downwardly directed flange a^8 . We also provide a sash b , composed of a top member b^1 , side members b^2 , and a bottom member b^4 , and the

top, side, and bottom members are provided with a groove or space b^6 , in which in practice the glass is placed, while the bottom member b^4 consists of a top portion b^7 and an outside portion b^8 .

The horizontal portion a^6 of the bottom member a^4 of the frame of the window is provided with a longitudinal raised track or way a^9 , which is preferably cylindrical in cross-section except at the bottom thereof, and mounted thereon and movable longitudinally thereof and transversely of the frame is a slide c , which is provided at the left-hand end, when viewed from the outside of the window, with an outwardly-directed jaw c^2 , which passes outwardly through the corresponding member b^8 of the bottom b^4 of the sash, and secured to the sash at the left-hand bottom corner thereof, when viewed from the outside of the window, is a corresponding jaw c^3 , connected with a bracket c^4 , which is secured to or formed integrally with the sash, and the jaws c^2 and c^3 are connected by a bolt or similar device c^5 . The slide c is provided at its inner side with an upwardly-directed flange c^6 , which fits in and moves in a corresponding groove c^7 , formed by the overhanging and outwardly and downwardly directed flange a^8 at the bottom of the window-sash.

At the upper left-hand corner of the sash, when viewed from the outside of the window, the construction shown in Figs. 3 and 4 is duplicated, or, in other words, the frame is provided with a slide similar to the slide c , and this slide is provided with an outwardly-directed jaw c^2 , and the sash is provided with a jaw c^3 , which is connected with the bracket c^4 , and as thus constructed the sash may be turned outwardly on the hinges formed by the jaws c^2 and c^3 and the bolt c^5 , and when the sash is turned outwardly it may be moved transversely of the frame into the position shown in Fig. 2 and may be turned outwardly, so as to afford access to either side thereof from within a room or compartment or from the inner side of the frame, and the said sash may thus be conveniently cleaned on both sides whenever desired. It will also be apparent that any suitable device may be provided for locking the sash in a closed position or for holding the same partially open; but these devices form no part of this inven-

tion and are therefore not shown and described.

In Fig. 6 we have shown a modification in which a frame *d*, composed of wood or other suitable material, is employed, together with a sash *e*, which is also composed of wood or other suitable material, and in this case a transverse member *f* is set into the bottom of the frame, which is similar in cross-section to the bottom of the frame shown in Figs. 1 to 5, inclusive, and the member *f* in this case is provided at the bottom thereof with a track or way *a*³ and with the overhanging and outwardly-directed flange *a*⁸. The slide *c* shown in Fig. 4 is also employed, and this slide is provided with the outwardly-directed jaw *c*², and the bracket *c*⁴ and the jaw *c*³ connected therewith are also employed, together with the bolt or similar device *c*⁵, which passes through the jaws *c*² and *c*³. In this form of construction the bottom of the sash *e* is provided with a metal plate *f*², which is secured thereto, and the bracket *c*⁴ is also secured to the side of the sash, and the jaw *c*², which is connected with the slide *c*, passes outwardly through the member *f*². It will be apparent that in this case the construction at the bottom of the sash is also duplicated at the top, as in the construction hereinbefore described and shown in Figs. 1 to 5, inclusive, and the operation will be exactly the same as the operation of the construction hereinbefore described.

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

1. A window-frame provided at the top and bottom with spaces which open outwardly, slides mounted in said spaces and adapted to

move transversely of the frame, jaws connected with one end of said slides and projecting outwardly, and a sash hinged to said jaws and adapted to swing outwardly, said sash being also adapted to move transversely of the frame, substantially as shown and described.

2. A window-frame provided at the top and bottom with spaces, slides mounted in said spaces and adapted to move transversely of the frame and provided at their corresponding ends with jaws which project outwardly, and a sash hinged to said jaws and adapted to swing outwardly, said sash being also adapted to move transversely of the frame, substantially as shown and described.

3. A window-frame provided at the bottom with a space which opens outwardly, the inner wall of said space being provided at the top with an outwardly and downwardly directed flange forming a groove, a slide mounted in said space and adapted to move transversely of the frame, and provided at its inner side with a flange which fits in said groove, said slide being also provided at one end with an outwardly-directed jaw, and a sash hinged to said jaw and adapted to swing outwardly, said sash being also adapted to move transversely of the frame, substantially as shown and described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 8th day of September, 1902.

WILLIAM SHRIVELL.
ARTHUR SHRIVELL.

Witnesses:

HERBT. TUTSCHLER,
H. D. JAMESON.