

A. C. SOULE.
 REVERSIBLE WINDOW.
 APPLICATION FILED JAN. 13, 1910.

1,005,344.

Patented Oct. 10, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

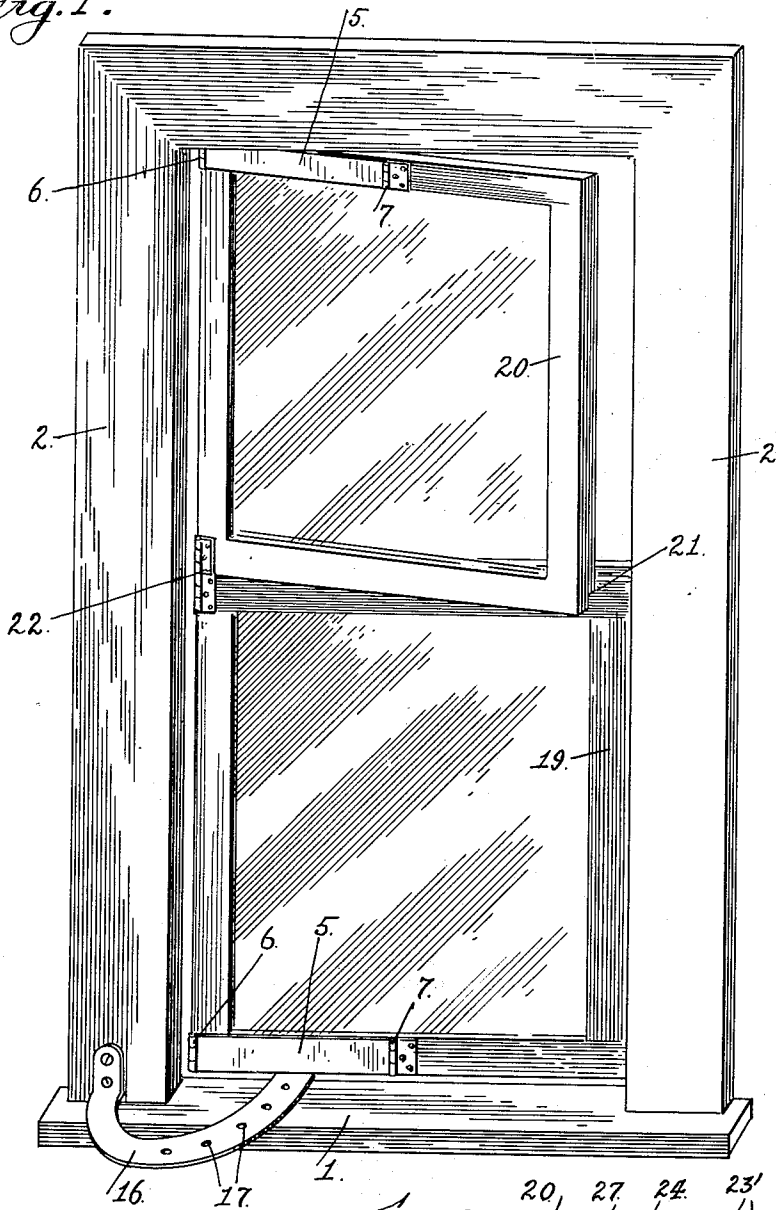


Fig. 2.

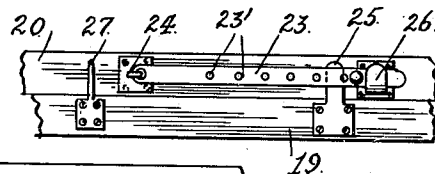
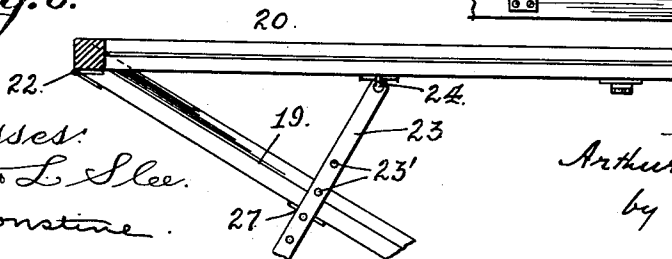


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 4.

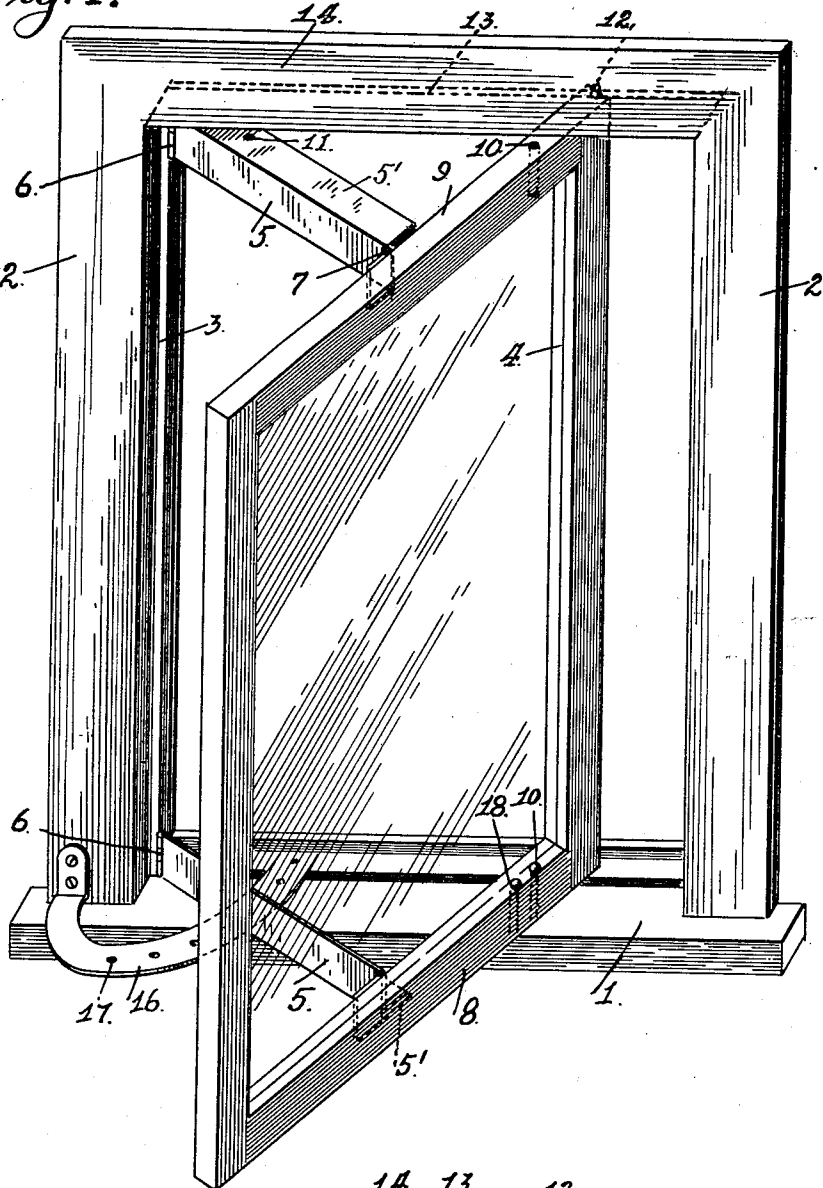
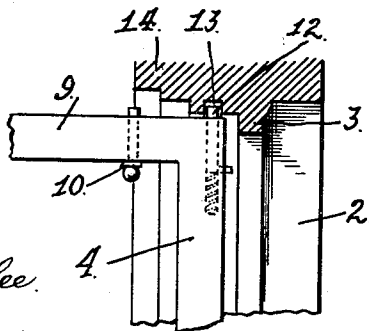


Fig. 5.



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UNITED STATES PATENT OFFICE.

ARTHUR C. SOULE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SOULE REVERSIBLE WINDOW CO., OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

REVERSIBLE WINDOW.

1,005,344.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed January 13, 1910. Serial No. 537,860.

To all whom it may concern:

Be it known that I, ARTHUR C. SOULE, a citizen of the United States, residing at the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Reversible Windows, of which the following is a specification.

My invention relates to the class of windows in which the sash is reversible for the purpose of affording convenience and safety in washing and cleaning.

The object of my invention is to provide a simple and effective double reversible sash, adapted for all requirements of movement and adjustment.

To this end, my invention consists in combination with the double sash and its casing, of the novel hinges and adjustable connections which I shall now fully describe by reference to the accompanying drawings in which—

Figure 1 is an elevation of my double sash, showing the application thereto of my novel connections, Fig. 2 is a detail view of the hasp connection between the two sashes, Fig. 3 is a detail view showing the relative adjustment of the two sashes and their adjustable connection, Fig. 4 is a perspective view of a single sash showing the connections between the sash and casing, the sash being positioned in the act of reversing, and Fig. 5 is a sectional detail view, to show the guide for the sash at the top.

1 is the window-sill and 2 are the stiles of the window casing, the latter being constructed to permit the window-sash to be freely movable outwardly.

With more particular reference to Figs. 4 and 5, 4 is the glazed sash fitting the window casing. 5 are the hinge-links upon which the movement of the sash depends. There are two of these links, one below and one above. Each link is formed with a flange 5' at right angles which not only stiffens it but forms a firm support for the sash, and serves the further purpose of a lock as will be presently seen. At one end, the link 5 is hinged to the inner-face of one of the casing stiles 2, as shown at 6, and at the other end it is hinged as shown at 7 to the sash frame, the lower link being hinged to the lower sash-rail 8, and the upper link being hinged to the upper sash-rail 9. Both links

lie on the outside of these rails, with their angled flanges 5' lying, the one on the lower edge of the lower rail, and the other on the upper edge of the upper rail, thereby furnishing a firm support for the sash. A slip-bolt 10 or other suitable fastening is seated in the inner face of the lower and upper sash rails respectively, said bolts passing down through the rails and adapted to enter a hole 11 in the angle-flanges 5' of the hinge-links. It will now be seen that when these bolts 10 are locked with the flanges 5' of the links, the latter are held fixed upon the outer faces of the sash rails so that the hinge at 7 at the sash end of the link is inoperative, and the window sash 4 can have only a swinging movement outwardly about the hinges 6 at the casing end of the links. But when the bolts 10 are withdrawn from their engagement and the links 5 thereby released, the sash may have not only a movement on hinge 6, but may have also a swinging movement on hinge 7, said movement continuing to a full reversal of the sash or to any intermediate extent. In these several movements the sash is well supported and steadied by the stiff hinge-links 5 and their flanges 5' which provide for said operations.

In order to make the movement, which tends to the partial or complete reversal of the sash, easy of accomplishment and to compel both links to act in unison, I have a dowel 12, Fig. 5, mounted on the upper rail of the sash near its hinged side, said dowel being adapted to travel in a groove 13 in the head jamb 14 of the window casing. As the sash turns on its double hinge centers, this dowel travels over in the groove and forces the symmetrical and equal operation of both hinge links, while it holds the sash in proper relation to the casing during the turning action. As the dowel travels over in the groove the sash will turn outwardly, and will pass through a position at right angles to its casing; and further movement will bring it, now reversed, in toward the casing, so that it may be conveniently reached from within for washing. If desired, the dowel 12 may be a slip-one, as shown in Fig. 5, so that it may be withdrawn from the groove, thereby freeing the sash which may then be pushed out entirely from its casing. In practice, however, this is hardly necessary, for the reversed sash

may be brought close enough in, to enable it to be conveniently reached, even if the dowel is not freed from the groove.

To the window casing outside of the sash is suitably secured a plate 16 which serves as both a steadying and a locking plate. In its former capacity it supports the sash in turning, thereby relieving the hinge links of part of the weight; and in its latter capacity it is provided with a series of holes 17 in the arc of a circle. With any of these holes, a slip-bolt 18 on the inner face of the lower sash-rail is adapted to engage, and thereby hold the sash open to any extent, when moved on its single centers at 6.

My improved double sash is shown in Figs. 1, 2 and 3. In this case there is a lower sash 19 and an upper sash 20, meeting in a joint at 21. The hinge-links 5 are applied, one to the lower sash and the other to the upper sash, as I have heretofore described. A double hinge 22 consisting of superposed butts is fitted to the stiles of the two sashes. These butts hinge the two sashes together, but leave them free of the casing. The two sashes may turn together or the upper one may turn independently of the lower. To hold the sashes together, to make them turnable in unison and to define the movement of the upper sash if turned independently, any suitable connection may be made, though I deem the one shown in Figs. 2 and 3 as well adapted for the purpose. It consists of a hasp 23 linked to a swivel eye 24 secured to the inside of the lower rail of the upper sash. This hasp has in it a number of holes 23'. Secured to the inner face of the upper rail of the lower sash is an arm 25 which overlaps the lower rail of the upper sash, and secured to said last named rail beyond the arm 25 is an open-topped keeper 26. The hasp when extended parallel with the lower rail of the upper sash will lie over the arm 25, and seat in the keeper 26, so that the two sashes are thus locked together and may be operated in unison. When the hasp is lifted from this locking position it will free the upper sash and allow it to be turned independently of the lower. But if, as for example, for

ventilation, merely, the upper sash is to be opened, the hasp may be made to fit any of its holes 23' over a pin 27 secured to the upper rail of the lower sash, as seen in Fig. 3.

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

1. In a reversible window, the combination of a casing; a lower sash and an upper sash both free to move from said casing; a pair of controlling links one of which links is hinged at one end to the casing and is hinged at the other end to the bottom rail of the lower sash, and the other link is hinged at one end to the casing and at the other end to the top rail of the upper sash; a hinge connection between the two sashes at one side, whereby they may move together or the upper one may move independently of the lower one, and a releasable fastening between the meeting rails of the sashes, whereby the sashes may be held together or released.

2. In a reversible window, the combination of a casing; a lower sash and an upper sash both free to move from said casing; a pair of controlling links one of which links is hinged at one end to the casing and is hinged at the other end to the bottom rail of the lower sash, and the other link is hinged at one end to the casing and at the other end to the top rail of the upper sash; means for releasably holding the links to the sash rails, to render operative or inoperative the hinge at the sash end of the links; a hinge connection between the two sashes at one side, whereby they may move together or the upper one may move independently of the lower one, and a releasable fastening between the meeting rails of the sashes, whereby the sashes may be held together or released.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR C. SOULE.

Witnesses:

WALTER S. BRAUN,
D. B. RICHARDS.