No. 878,253. PATENTED FEB. 4, 1908.

A. STRAUBHAAR.

WINDOW.

APPLICATION FILED JULY 16, 1907.

Fig. 1.

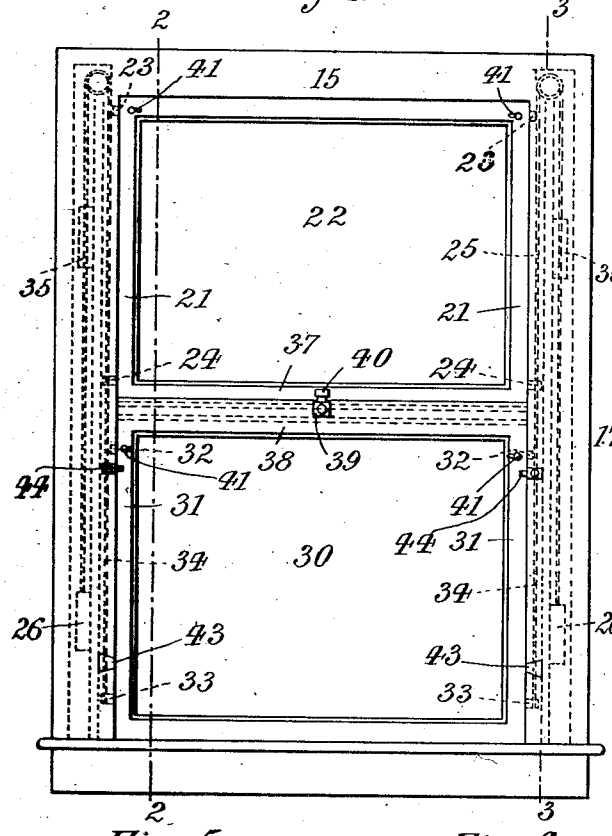


Fig. 2.

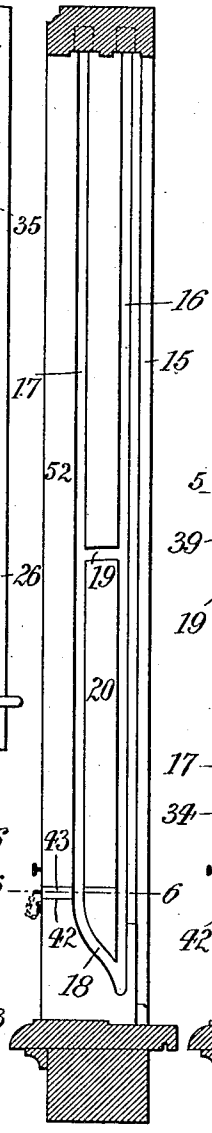


Fig. 3.

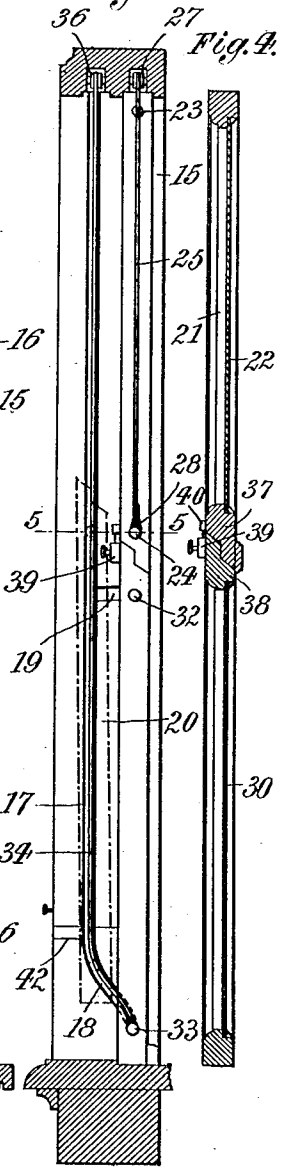


Fig. 4.

Fig. 5.

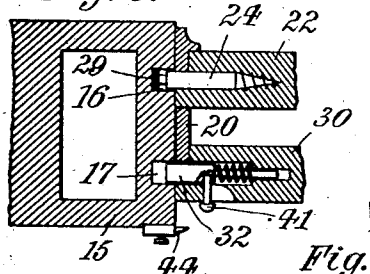


Fig. 6.

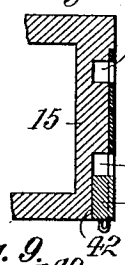


Fig. 9.

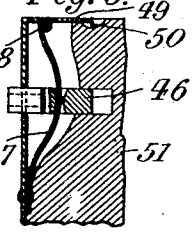


Fig. 10.

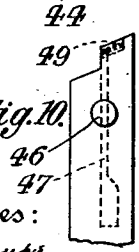


Fig. 7.

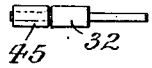
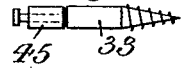


Fig. 8.



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UNITED STATES PATENT OFFICE.

AUGUST STRAUBHAAR, OF PATERSON, NEW JERSEY.

WINDOW.

No. 878,253. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed July 16, 1907. Serial No. 383,987.

To all whom it may concern:

Be it known that I, AUGUST STRAUBHAAR, a citizen of Germany, residing at Paterson, Passaic county, State of New Jersey, have invented new and useful Improvements in Windows, of which the following is a specification.

This invention relates to a window which is so constructed that when closed, both sliding sashes will be brought into vertical alinement. In this way draft is excluded and the sashes are held against unauthorized opening from the exterior.

The invention further comprises means for permitting the ready removal of the sashes from the window frame, so that cleaning is facilitated and repairs may be easily made.

In the accompanying drawing: Figure 1 is an inner elevation of my improved window; Fig. 2 an enlarged vertical section on line 2—2, Fig. 1, with the sashes omitted; Fig. 3 a section on line 3—3, Fig. 1, showing the window closed; Fig. 4 a vertical section through the sashes; Fig. 5 a horizontal section on line 5—5, Fig. 3, with the lower sash partly raised; Fig. 6 a horizontal section on line 6—6, Fig. 2; Figs. 7 and 8 are details of modifications of the guide pins; Fig. 9 a section of a modification of the pin-operating means, and Fig. 10 an end view of Fig. 9.

The window frame 15 is provided with an outer groove 16 and an inner groove 17, the lower outwardly curved end 18 of which communicates with the lower end of groove 16. A transverse by-pass 19 extending through parting strip 20 further connects the grooves 16 and 17 at about their center. Opposite by-pass 19, the inside window bead 52, is imperforate, to constitute a stop extending across such by-pass. Each stile 21 of the upper sash 22 is provided with a pair of pins 23, 24 engaging groove 16. Of these, lower pin 24 is somewhat longer than upper pin 23, and serves for the attachment of the sash-cord 25 that carries counter-weight 26 and passes over pulley 27 on top of groove 16. Sash-cord 25 is preferably provided with a looped lower end 28 slipped over head 29 of pin 24, so that it may be readily disconnected from the latter.

The lower sash 30 is constructed similarly to the upper sash, that is to say, each of its stiles 31 has an upper pin 32 and a lower pin 33 projecting into groove 16. To lower pin 33 is removably secured the looped lower end of sash-cord 34 carrying counter-weight 35. This sash-cord passes from pin 33 through groove 18, 17, to a pulley 36 on top of the latter.

The bottom rail 37 of upper sash 22 has a rabbeted lower side adapted to register with a correspondingly rabbeted upper rail 38 of lower sash 30. A spring latch 39 on rail 38, adapted to engage a keeper 40 of rail 37, locks the window in its closed position.

The pins of the upper sash, as well as those of the lower sash, engage outer groove 16 when the window is closed, so that both sashes are then located in a common vertical plane, (Fig. 4). To open the lower sash, latch 39 is withdrawn and upper end of sash 30 is tilted inward, so that its upper pins 32 will swing through by-pass 19 into inner groove 17. When the lower sash is now pushed up, its bottom pins 33 will, through inclined section 18, likewise enter groove 17 owing to the inward pull of sash-cord 34. The lower sash may now be freely moved up and down along groove 17, while the upper sash may be as freely moved along the now vacated groove 16. To close the window the lower sash is pulled down so that its lower pins 33 reënter the bottom of groove 16, and is then swung outward at its top to push upper pins 32 through by-pass 19, back into groove 16.

Means are provided for permitting the guide pins to be entirely withdrawn from the grooves, so that the sashes may be readily removed from the frame. To this effect the upper pins 23, 32 are made in the form of spring bolts operable by handles 41, by means of which they may be retracted to clear grooves 16, 17. The lower pins 24, 33 may be withdrawn from groove 17 by means of communicating branch grooves 42 normally closed by plugs 43. This branch groove 42 extends through the inside bead 52 directly above the lower curved section 18 of groove 17.

To remove the sashes, they are successively brought into their lowermost position and after the upper pins have been retracted, the lower pins are withdrawn through curved section 18 and branch 42 the latter permitting the withdrawal of such pins after a minimum lift of the sashes along grooves 17.

Catches 44 on frame 15 adapted to be projected over lower sash 30, serve to prevent tilting of the latter in case pins 32 become disengaged from their guide grooves. If desired, the upper as well as the lower guide

pins may be provided with anti-friction rubber sleeves 45, (Figs. 7 and 8), to facilitate their movement along the grooves.

Figs. 9 and 10 illustrate modified means for retracting the upper pins from the grooves. Here upper pin 46 is influenced by a spring 47, to the upper free end of which is hinged at 48 a finger-piece 49. When this finger-piece is swung down, it engages an offset 50 of sash frame 51 and thereby locks the pin in its outward position. When the finger-piece is swung up, spring 47 is released to withdraw the pin from the groove.

It will be seen that by my invention both sashes occupy a common vertical plane when the window is closed. This improves the appearance of the window, prevents the deposit of dust on the top rail of the lower sash, and effectively holds the sashes against unauthorized opening. If the window is to be cleaned or repaired, the sashes may be readily removed from the frame by withdrawing the guide pins from the grooves and disconnecting the cords from the pins.

I claim:

A window provided with an outer groove, an inner groove having a lower curved section communicating with the outer groove, a by-pass connecting the grooves, a branch groove opening into the inner groove directly above the lower curved section thereof, a pair of sashes, and upper and lower pins on the sashes adapted to engage the by-pass and branch groove respectively, substantially as specified.

Signed by me at New York city, (Manhattan,) N. Y., this 13th day of July 1907.

AUGUST STRAUBHAAR.

Witnesses:
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FRANK V. BRIESEN.