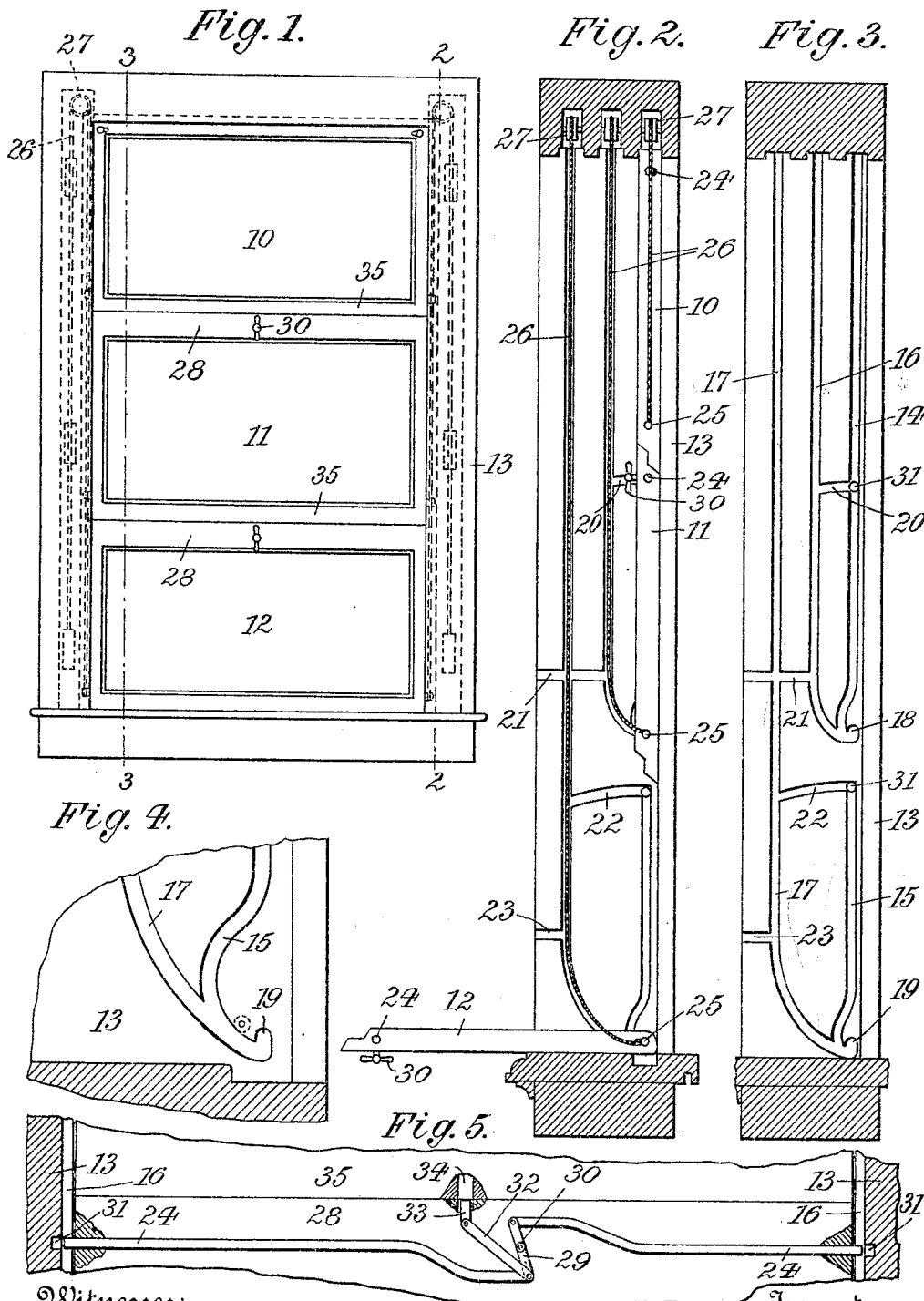


932,187.

Patented Aug. 24, 1909.



Witnesses:
Arthur E. Gump.
H. R. Schulz.

Inventor
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By his Attorney
Frank R. Priesel

UNITED STATES PATENT OFFICE.

AUGUST STRAUBHAAR, OF NEW YORK, N. Y.

WINDOW.

932,187.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed August 13, 1908. Serial No. 448,300.

To all whom it may concern:

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

This invention relates to a window of the kind described in Patent No. 878,253, granted to me February 4, 1908, and in which the sashes are adapted to be brought into vertical alinement when the window is closed.

The present invention has for its object to facilitate the manipulation of the window and to provide novel and effective means for maintaining the fulcrums of the sashes in position when the latter are swung into the room for cleaning purposes.

In the accompanying drawing: Figure 1 is an inner elevation of my improved window; Fig. 2 a vertical transverse section on line 2—2, Fig. 1; Fig. 3 a similar section on line 3—3, Fig. 1; Fig. 4 a detail of the sash grooves, and Fig. 5 a detail of the upper guide pins and locking bolt.

The invention is shown to be applied to a window having three sashes 10, 11, 12, but one of such sashes may be omitted if desired. The window-frame 13 is provided with an upper outer groove 14, a lower outer groove 15, a central groove 16, and an inner groove 17. Grooves 14, 16 converge at their lower ends and terminate in an upwardly directed pocket 18 located beyond the merger of the grooves. In like manner grooves 15, 17 converge at their lower ends and terminate in the upwardly extending pocket 19. Grooves 14, 16 are, at a distance above their lower end, connected by a by-pass or channel 20, while grooves 16, 17 are connected above the curved lower end of the former by a by-pass 21 which extends to the inner edge of the window frame. A third by-pass 22 extends from top of groove 15 into groove 17, while a fourth by-pass 23 extends from the lower curved end of groove 17 to the inner edge of frame 13.

Each of the three sashes 10, 11 and 12 is provided with a pair of upper guide pins 24 and a pair of lower guide pins 25. To the latter are attached the sash cords 26 running over pulleys 27 that are hung above grooves 14, 16, 17, respectively.

When the window is closed all three sashes 10, 11 and 12 are located directly below one another, the guide pins of upper sash 10 being received within the upper half of groove 14, the guide pins of central sash 11 being received within the lower half of said groove, while the guide pins of bottom sash 12 are received within groove 15.

To open the central sash, its upper pins are swung through by pass 20 into groove 16, so that when the sash is raised, its lower pins will also enter said groove through the curved lower end of the latter. In this way sash 10 may now be freely moved up and down along the entire length of way 14, while sash 11 has a similar play along way 16.

The bottom sash 12 may be moved from groove 15 to groove 17 by first swinging its upper pins 24 from the former into the latter through by-pass 22 and then raising the sash so that its lower pins will also enter groove 17. Thus each sash will now be provided with its individual run along which it may be raised or lowered.

The upper pins 24 of sashes 11, 12 are so constructed that they may be withdrawn to clear their grooves when the sash is to be swung inward. As shown, pins 24 move in the upper sash rails 28 and are connected by a two-arm lever 29 carrying a handle 30 by which pins 28 may be simultaneously advanced or retracted.

When the sash is closed, pins 24 become horizontally alined with sockets 31 communicating with grooves 14, 15, so that pins 24, on being advanced to their maximum extent will traverse the grooves and enter said sockets, so as to lock the sash to the frame. To lever 30 is further connected by link 32, a bolt 33 entering a recess 34 in the bottom rail 35 of the sash next above, so that when the sash is locked to its frame, it will become simultaneously locked to the adjoining sash.

When a sash is to be cleaned, its upper pins are retracted to clear their grooves and permit the sash to be swung into the room. During this movement lower pins 25 will become entrapped within the hook-shaped pockets 18, 19, by which they are held against vertical displacement owing to the pull of the sash-weights. In this way the

sashes may be safely tilted on their lower pins, so that their entire surface is readily accessible to the cleaner.

5 If the sashes are to be entirely removed, their upper pins are retracted, while the lower pins are liberated through by-passes 21, 23.

10 It will be seen that by the construction described, the sashes may be made to assume positions in advance or below one another, that they may be readily locked, and that they are securely held against displacement while swinging on their fulcrums.

I claim:

15 1. A window provided with an outer groove, an inner groove that merges into the outer groove, a deflected pocket com-

municating with the grooves beyond the merger thereof, and sashes having pins adapted to engage said grooves and pocket. 20

2. A window provided with an outer groove, an inner groove that merges into the outer groove at its lower end, an upwardly extending pocket communicating with the lower ends of the grooves, and sashes having 25 pins adapted to engage said grooves and pocket, substantially as specified.

Signed by me at New York city, (Manhattan,) N. Y., this 12th day of August, 1908.

AUGUST STRAUBHAAR.

Witnesses:

FRANK V. BRIESEN,
AUGUST MINER.