

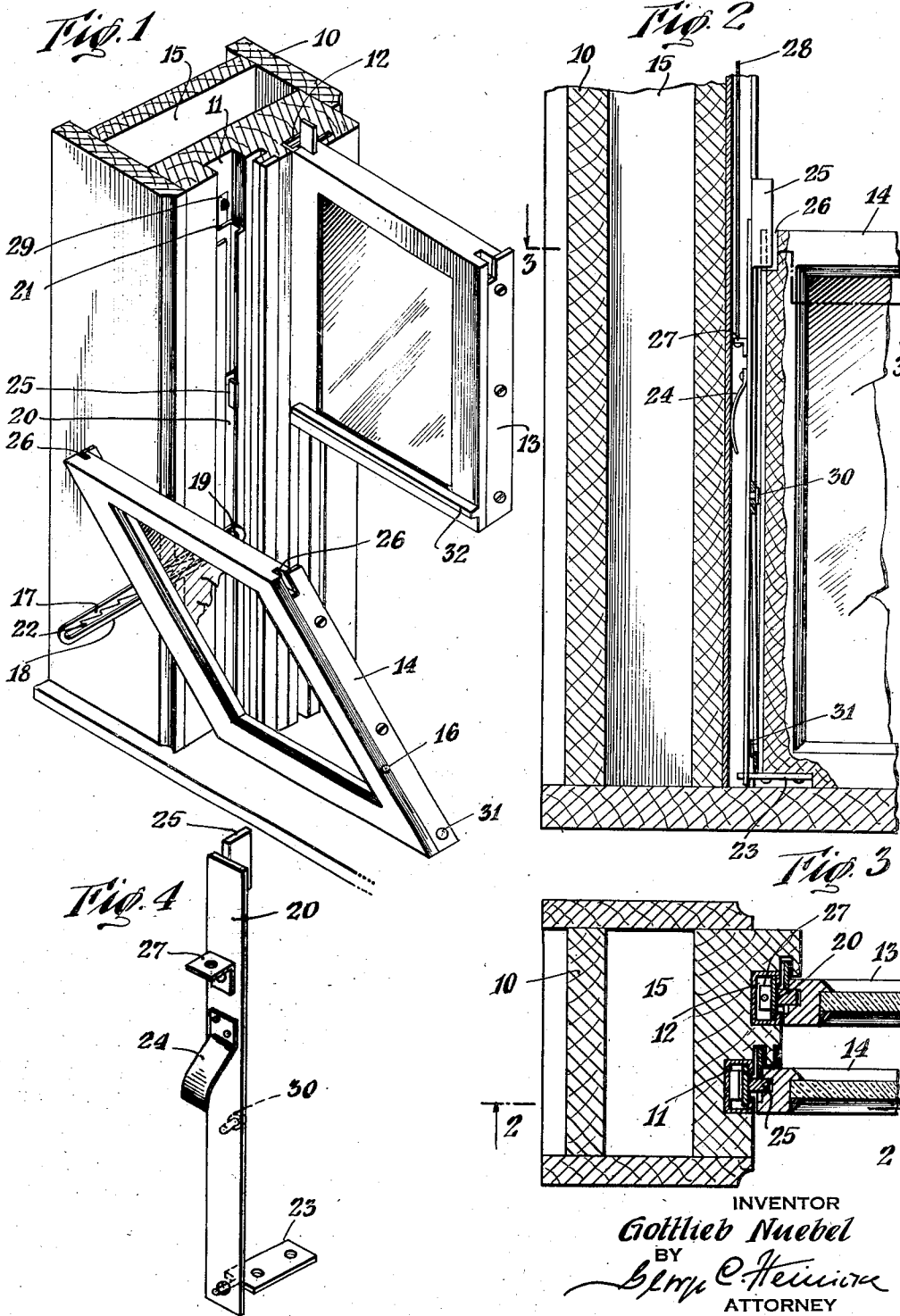
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WINDOW CONSTRUCTION

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WINDOW CONSTRUCTION

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This invention relates to improvements in window construction, and it is the main object of my invention to provide a window the sashes of which are adapted to be tilted inwardly at selectively different angles without interference with the customary vertical reciprocatory movement of the sashes, so as to admit air freely into a room and to allow a convenient cleaning of the window panes on both sides without danger.

Another object of my invention is the provision of a window equipped with spring controlled sliding members participating in the sash movements to which the customary weighted sash cords are secured, and which are provided with locking members engaging suitable keeper recesses in the side bars of the window sashes under the action of the springs controlling said members.

A further object of my invention is the provision of a window the sashes of which turn about pivot pins near their lower ends secured to the sliding members, and are provided with studs on their side bars engaging into longitudinal slots of links pivoted at their inner ends to the sliding members, and having shoulders formed in their slots against which said studs come to rest when the links are swung about their pivots to assume any desired angle with respect to the window frame and to hold the sashes in any of these angular positions.

A still further object of my invention is the provision of a window construction which is comparatively simple and inexpensive, yet durable and highly efficient in use, and which can be readily installed in any window of the present day.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claims.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a fragmentary perspective view of a window frame equipped with sashes constructed according to my invention.

Fig. 2 is a fragmentary longitudinal section on line 2—2 of Figure 3.

Fig. 3 is a cross-section on line 3—3 of Figure 2.

Fig. 4 is a detail view of a slider and hanger member.

As illustrated, a window frame or casing 10 of the usual well known construction and provided with the customary guide grooves 11, 12 in which the upper and lower sashes 13, 14 respectively

slide, has the usual channels 15 for the reception of the weights and their cords.

The side bars of the sashes are provided near their lower ends with protruding studs 16 engaging in slots 17 longitudinally extending in the links 18 which are pivotally secured at their inner ends, as at 19, to the slide bars or members 20 arranged within substantially U-shaped metal grooves or channels 21 within the grooves 11 and 12.

These bars will be more fully described hereinafter, and the links 18 are provided within their slots 17 with teeth or shoulders 22 to be engaged by the studs 16 in order to hold the sashes at any desired angle to the window casing, for instance as shown in Figure 1.

The sliding bars or members 20 reciprocate in the channels 21 and participate in the up and down movements of the sashes to which they are secured by means of their foot parts 23.

Leaf springs 24 normally space the bars 20 from the bottom faces of the U-grooves 21, and have the tendency to normally press latches 25 on said bars into engagement with suitable keeper recesses in the sash frames, indicated at 26. Brackets 27 have suitable perforations and are arranged at the inner faces of the slide members 20 for the purpose of securing thereto the ends of the sash cords 28 which are then guided over the rollers 29 and carry the weights in channels 15 of the window casing in the usual manner. The pins 30 on bars 20 limit their inward movement and pins 31 on the lower ends of the side bars of the sashes engage the slide bars 20 at their lower ends and allow a turning of the sashes about projections from the foot plates 23 to any desired angle to the window casing.

Strips 32 at the inner faces of the meeting bars of upper and lower sashes provide for a tight closure at these places.

In operation, if it is desired to tilt the sashes about their pivot pins on the foot plates 23 the engagement between latches 25 and recesses 26 is broken by repressing the bars 20 against the action of springs 24 and the sashes can now be swung out to any desired angle to the window casing by engaging the studs 16 with any of the shoulders 22 in the slots of links 18. If the sashes are returned into their closing position, the springs 24 will automatically engage the latches 25 again with the keepers 26 and as the slide bars have attached thereto the cords of the sash weights, and are themselves sliding up and down

in the U-channels, the windows can be lowered or raised in the usual manner.

It will be understood that I have described and shown the preferred form of my invention only as one example of the many possible ways to practically construct the same, and that I can make such changes in the general arrangement of the window construction and in the construction of its minor details, as come within the scope of the appended claims without departure from the spirit of my invention and the principles involved.

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

1. In a window construction of the class described, a sliding member arranged for vertically reciprocatory movement in a groove of the window casing, a bracket having a perforation for the attachment of the weighted sash cords and attached to the inner face of said sliding member, a latch on said sliding member, sashes having recessed bars adapted to be engaged by said latches, a spring on the inner face of said sliding member to normally hold its latches in engagement with the recesses of said sash bars to couple said sliding member, sash cords and their weights to said sashes for the usual vertical reciprocatory movement, said spring when repressed allowing the disengagement of said latches from the recesses of the sash bars, slotted links connected to said slide member and hinge pins engaging in the slots of said links and connecting sash bars and sliding member about which the sashes can be turned when uncoupled from said sliding member, and a means to determine the angle of such

turn to the window frame and hold the sashes in their adjusted positions, a foot part on said sliding member connecting the same to the window sash for participation in the up and down movement of the sash, and pins on said sliding member to limit its inward movement when uncoupled from said sash.

2. In a window construction as described, the combination of the vertically reciprocating window sashes having recesses in their frames and sliding in guide grooves of the window frame having substantially U-shaped metal grooves formed therein, with sliding bars reciprocating in said U-channels, and foot parts securing said slide bars to the lower ends of the sash frames and having pivot pins about which said sashes are turnable, latches on said slide bars and leaf springs on said slide bars intermediate their ends to space the same from the bottom parts of said U-channels and having the tendency to normally press said latches into the recesses in said sash frames, a perforated bracket at the inner face of said sliding bars to which the ends of the sash cords are secured, and links having longitudinal slots, pivotally secured at their inner ends to said slide bars, shoulders formed by teeth within the slots of said links, and studs on the side bars of the sashes engaging said shoulders in the links to hold the sashes at any desired angle to the window frame when turned inwardly about their pivot pins, and pins on said slide bars to limit the inward movement of said slide bars to determine the amount or degree to which said sliding bars are to be bent during the disengagement of said latches from the recesses in said sashes.

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