May 27, 1969 E. E. FOSTER 3,445,964

TILT-IN WINDOW SASH

Filed Oct. 17, 1967 Sheet 1 of 5

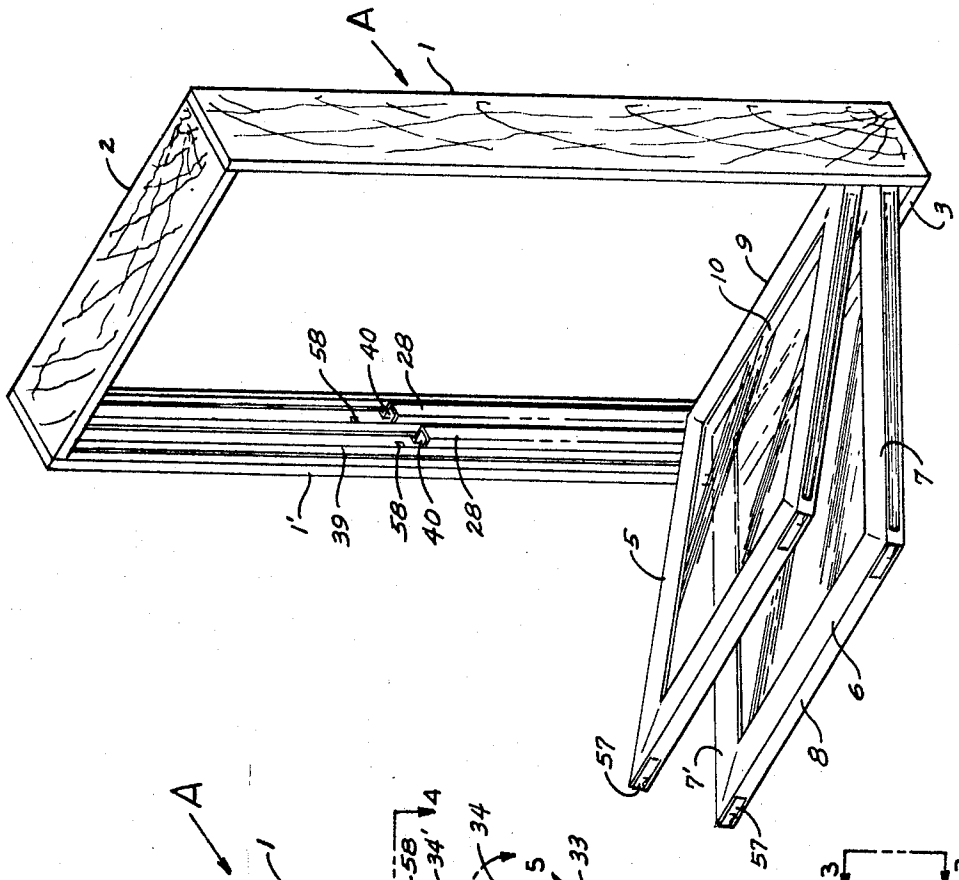


FIG. 2

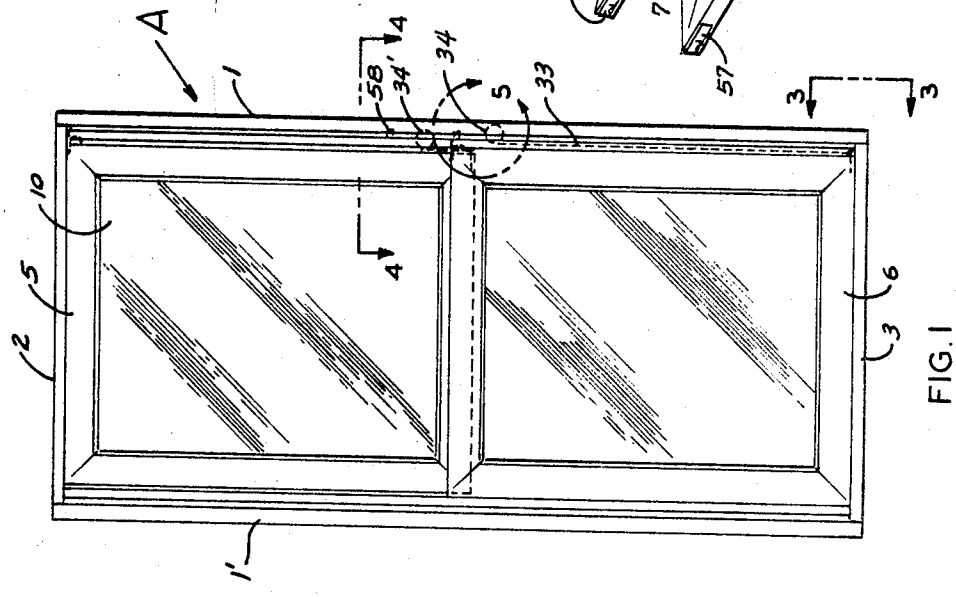


FIG. 1

INVENTOR

EDWIN E. FOSTER

BY Ralph W. Kalish

ATTORNEY

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TILT-IN WINDOW SASH

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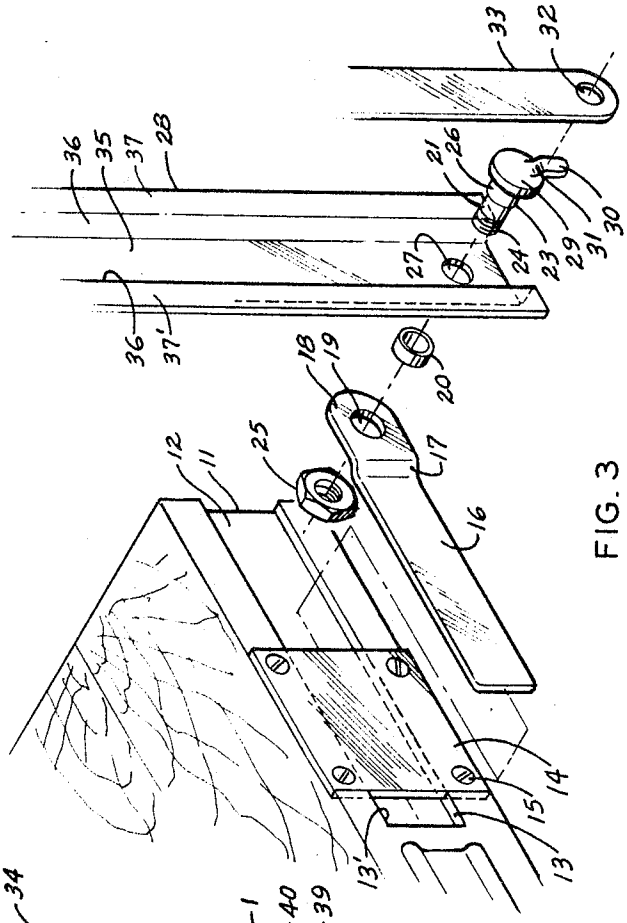


FIG. 3

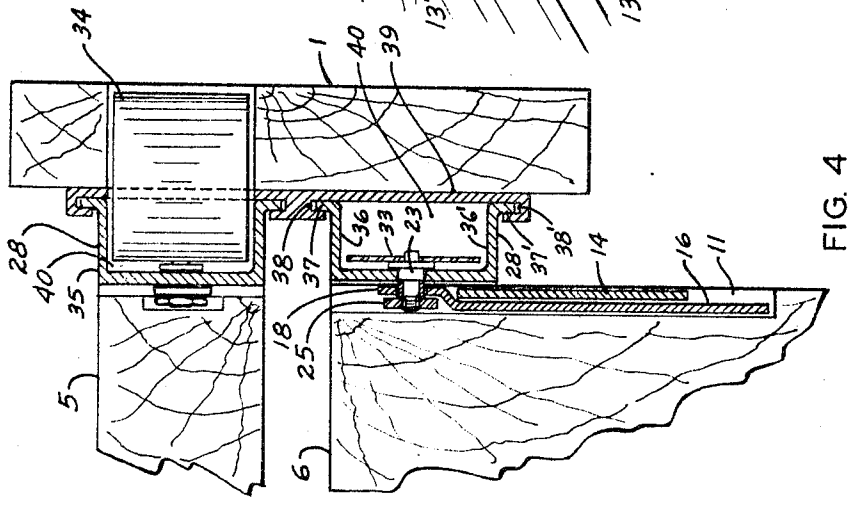


FIG. 4

INVENTOR

EDWIN E. FOSTER

BY Ralph H. Kalish

ATTORNEY

May 27, 1969 E. E. FOSTER 3,445,964

TILT-IN WINDOW SASH

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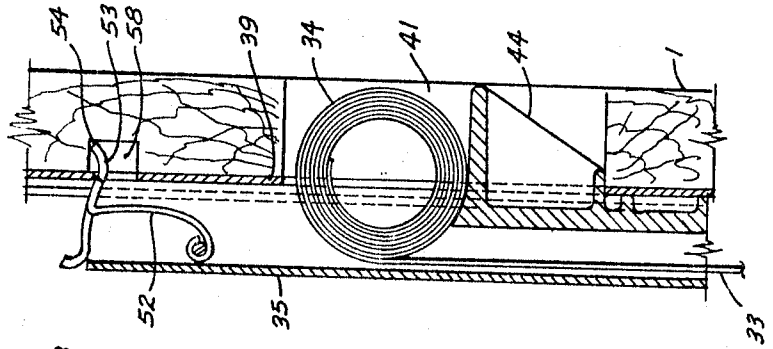


FIG. 7

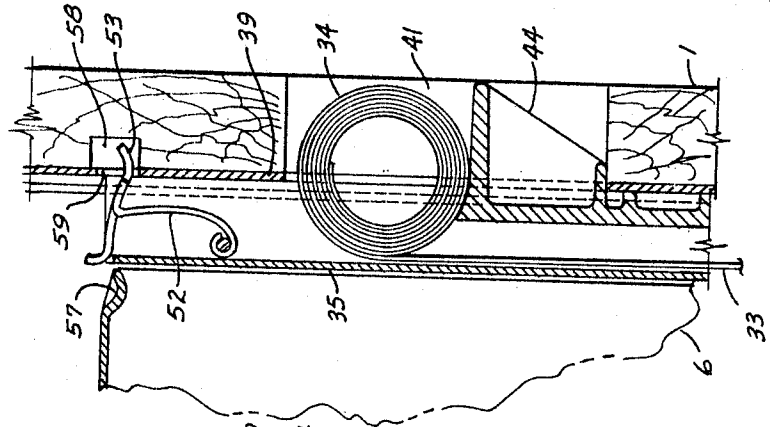


FIG. 6

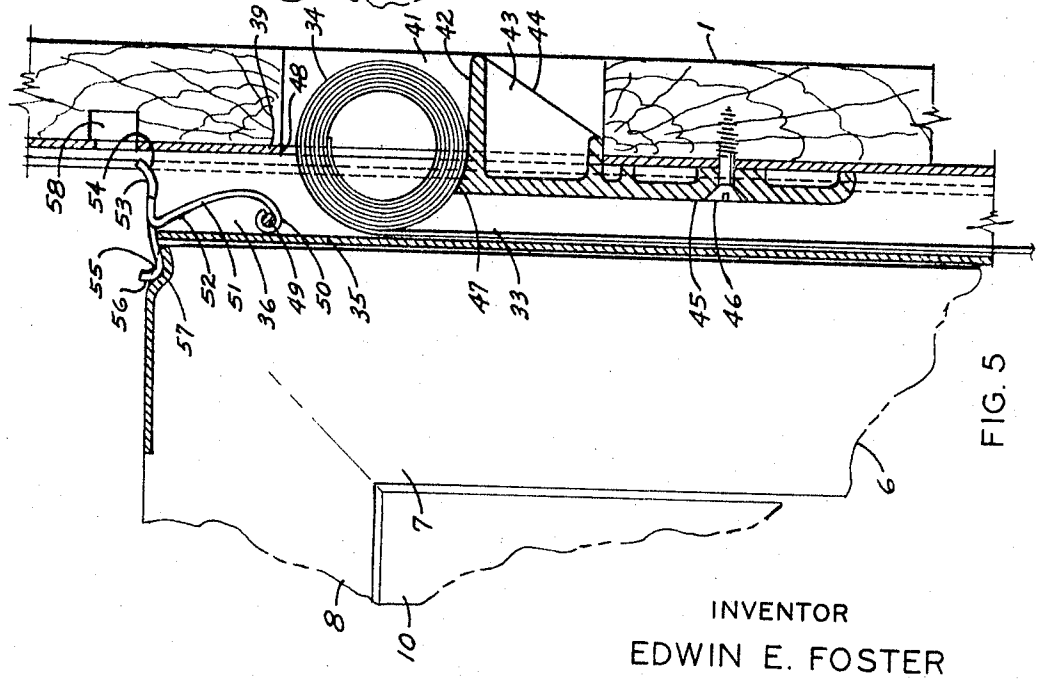


FIG. 5

INVENTOR

EDWIN E. FOSTER

BY Ralph W. Kalish

ATTORNEY

May 27, 1969

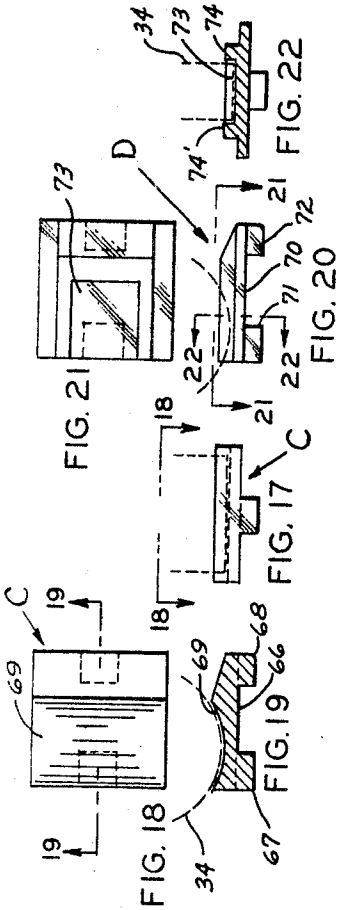
E. E. FOSTER

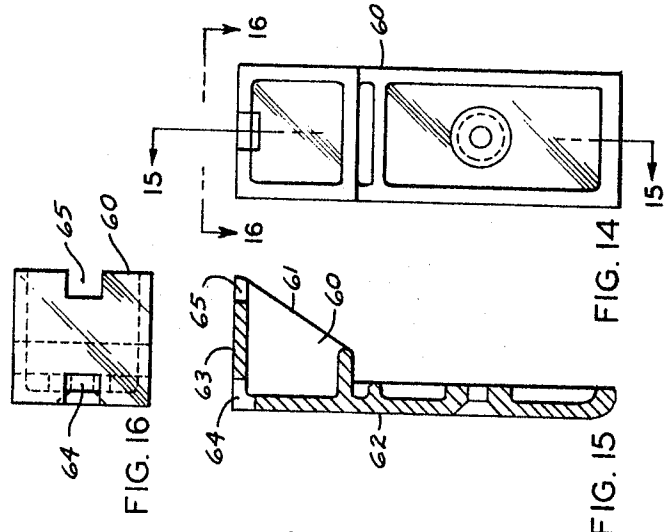
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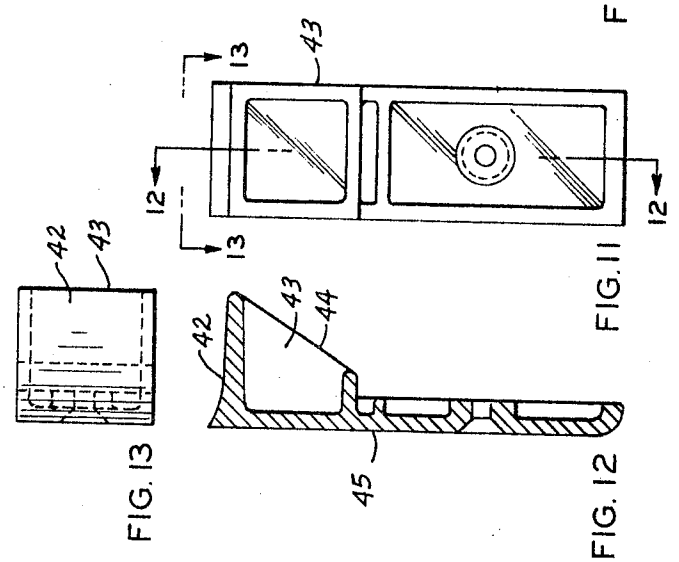
TILT-IN WINDOW SASH

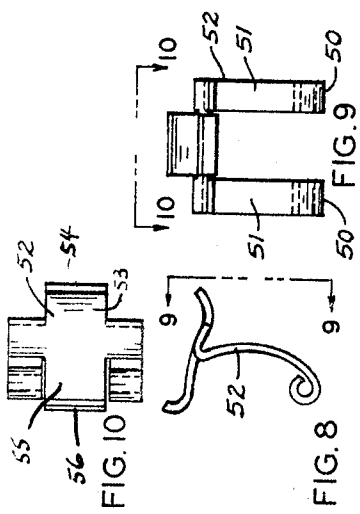
Filed Oct. 17, 1967

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INVENTOR

EDWIN E. FOSTER

BY Ralph N. Kalish

ATTORNEY

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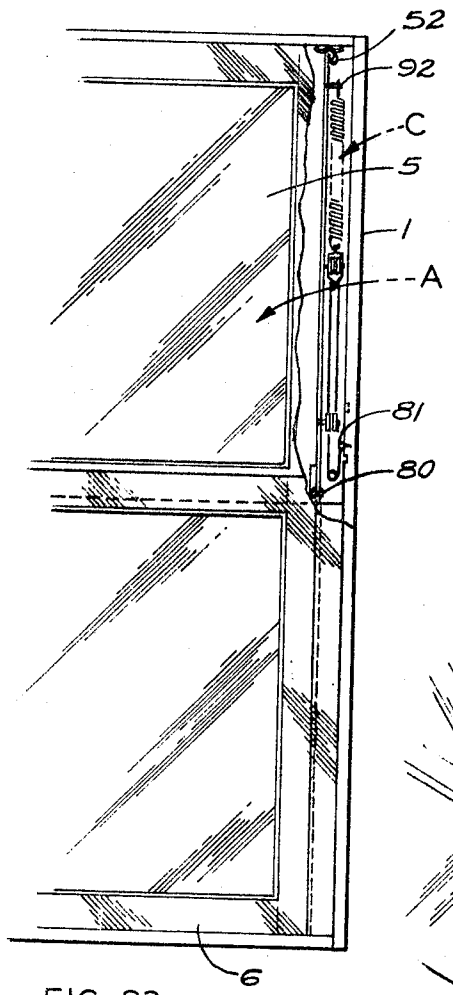


FIG. 23

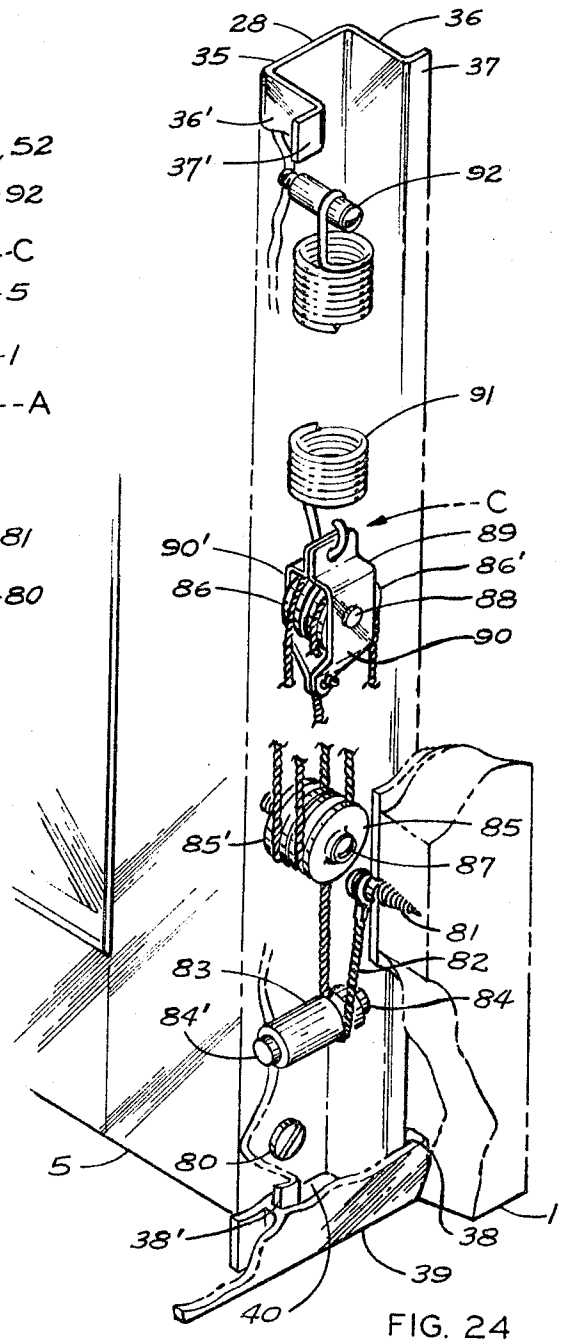


FIG. 24

INVENTOR

EDWIN E. FOSTER

BY Ralph W. Kalish

ATTORNEY

United States Patent Office 3,445,964 Patented May 27, 1969

3,445,964

TILT-IN WINDOW SASH

Edwin E. Foster, 1801 Camp Craft Road, Austin, Tex. 78746

Filed Oct. 17, 1967, Ser. No. 675,899
Int. Cl. E05d 15/22, 13/10
U.S. Cl. 49—183 13 Claims

ABSTRACT OF THE DISCLOSURE

A window comprising upper and lower slideable sashes having slide members pivotally mounted at their lower ends upon such sashes for travel within guideways provided on the window jambs; there being latch elements for engaging the sashes and the slide members at the upper ends of the latter so that upon unlocking action the sashes will be freed for pivotal movement about an axis passing transversely through their lower ends. A sash counter-balance is engageable with the slide members.

Background of the invention

Heretofore, in double-hung windows, that is those having upper and lower slideable window sash, there has been the unresolved, long-standing problem of adapting such sashes for inward tiltable movement so as to conveniently present the exterior faces thereof for cleaning, repair, etc. In order to effect such operations upon current constructions, the user is faced with the alternative of either operating from the outside of the building, with attendant hazards and difficulties, or dismantling the window, which latter procedure is quite time-consuming, both in dismantling as well as in restoration and often requires the services of skilled personnel. Thus, there has long been felt the need for some manner in which to effectively render slideable sash for inward tilting, and to allow for ready return to operable disposition, without necessitating the assistance of qualified individuals.

Summary of the invention

It is therefore an object of the present invention to provide a window sash which is adapted for inward swinging about a pivot axis passing transversely through its lower portion so as to render its exterior face accessible within the interior of the building.

It is another object of the present invention to provide the upper and lower slideable sashes of a double-hung window with means for inward tilting about their lower margins, and being so related that the same may be in inward-tilted position simultaneously.

It is a further object of the present invention to provide an inwardly tiltable window sash which may be counter-balanced by a coil spring with means for maintaining said counter-balance in sash-engaged relation during tilting of the latter, thereby obviating any need for disconnection.

It is an additional object of the present invention to provide a window sash of the character set forth which embodies novel latch means for engagement between the same and a slide member for vertical travel of said sash and allowing disengagement to permit swinging of said sash with respect to its related slide members.

It is another object of the present invention to provide tilt-in window sash of the character stated which are most economically produced; which can be rendered usable with existing window construction without requiring extensive and costly modification; which are particularly adapted for wooden window construction; and which sashes together with their coacting components are durable and reliable in usage.

Brief description of the drawings

FIGURE 1 is a front view of a double-hung window having tilt-in window sash constructed in accordance with and embodying the present invention.

FIGURE 2 is a perspective view of the window illustrated in FIGURE 1 but illustrating the window sash in tilted-in position.

FIGURE 3 is a fragmentary exploded perspective view of components for connecting the window sash, the slide member, and the counter-balance, as viewed generally along the line **3—3** of FIGURE 1.

FIGURE 4 is a fragmentary sectional view taken substantially on the line **4—4** of FIGURE 1 but showing the lower sash in tilted-in position.

FIGURE 5 is a fragmentary transverse sectional view taken in the zone indicated in FIGURE 1 and illustrating the sash as locked to the slide member.

FIGURE 6 is a vertical transverse sectional view taken in the same zone as FIGURE 5 but illustrating the sash in unlocked condition.

FIGURE 7 is a vertical transverse sectional view taken in the same zone as FIGURE 5 but illustrating the disposition of the latch member with respect to the window jamb upon sash tilting.

FIGURE 8 is a side view of the latch member.

FIGURE 9 is an end view of the latch member as seen along the line **9—9** of FIGURE 8.

FIGURE 10 is a top plan view of the latch member as seen along the line **10—10** of FIGURE 9.

FIGURE 11 is a rear view of the counter-balance mounting.

FIGURE 12 is a vertical transverse sectional view taken on the line **12—12** of FIGURE 11.

FIGURE 13 is a top plan view taken on the line **13—13** of FIGURE 11.

FIGURE 14 is a rear view of another form of counter-balance mounting constructed in accordance with and embodying the present invention.

FIGURE 15 is a vertical transverse sectional view taken on the line **15—15** of FIGURE 14.

FIGURE 16 is a top plan view taken on the line **16—16** of FIGURE 14.

FIGURE 17 is a front view of a pair of balanced saddles constructed in accordance with and embodying the present invention.

FIGURE 18 is a top plan view taken on the line **18—18** of FIGURE 17.

FIGURE 19 is a vertical transverse sectional view taken on the line **19—19** of FIGURE 18.

FIGURE 20 is a side view or another form of counter-balance saddle constructed in accordance with and embodying the present invention.

FIGURE 21 is a top plan view taken on the line **21—21** of FIGURE 20.

FIGURE 22 is a vertical transverse sectional view taken on line **22—22** of FIGURE 20.

FIGURE 23 is a front view of a window having the top sash in full upward position and incorporating another form of sash counter-balance.

FIGURE 24 is a perspective view partially broken away illustrating the sash counter-balance shown in FIGURE 23.

Description of the preferred embodiment

Referring now by reference characters to the drawings which illustrate the preferred embodiment of the present invention, A generally designates a window, as fabricated of wood, and comprising a window frame having side jambs **1**, **1'**, a header **2**, and a sill **3**. Said window A may be of the double-hung type having upper and lower window sash **5**, **6** respectively, each of which comprises side

components 7, 7' and upper and lower transverse members 8, 9 respectively; said window sash elements being adapted for retaining a pane of glass or the like, as indicated at 10.

Each side component 7, 7' of each sash 5, 6 in its lower end side portion (as may best be seen in FIGURES 3 and 4) is provided with an outwardly opening channel 11 as defined by a web 12 extending to lower extremity of the related component 7, 7' and shoulder-forming sides 13, 13' which are spaced inwardly from the forward and rearward edges of related side components 7, 7'. Extending across the upper portion of each channel 11 is a plate 14 secured, as by screws 15, upon the outwardly directed face of the sash and serving to retain the normally upper or free end of an elongated finger 16 which is disposed within channel 11. At its lower end each finger 16 is outwardly offset as at 17 to present an end boss 18 in substantially planarwise parallel relation with plate 14 and having an aperture 19 for reception of a spacer sleeve 20 through which project a smooth-surfaced portion 21 of a rivet-like fastener 23. Fastener 23 at its inner end is threaded as at 24 for engaging a nut 25 disposed between boss 18 and channel web 12 (FIGURE 4). Outwardly of portion 21, fastener 23 is diametrally increased as at 26 for acceptance within an aperture 27 formed in the lower end of a slide member 28 fabricated preferably of metal, plastic or the like. The outer end of fastener 23 is constituted of an enlarged head 29 integral with which is a downwardly depending relatively short finger 30, spaced from head 29 by an offset portion 31 against the underface of which abuts the lower edge of an opening 32 provided in the lower end of the ribbon 33 of a counter-balance spring 34 which may be of the self-coiling type and made in accordance with United States Letters Patent No. 2,609,191. Finger 30 normally projects beyond the lower end of said spring ribbon 33.

Each slide member 28 is of generally channel or so-called hat-shape having a web 35 and side flanges 36, 36'; which channel opens outwardly so that flanges 36, 36' are directed away from the related sash 5, 6 and toward window jambs 1, 1' as the case may be. Each of flanges 36, 36' at its outer end is turned through an angle of approximately 90° to provide tongues 37, 37' respectively for slideable disposition within slideways 38, 38' in guide members 39; said latter being formed as of extruded plastic and being fixedly secure against the inwardly directed face of the related side jamb 1, 1'. As shown in FIGURE 4, guide members 39 together with webs 35 and flanges 36, 36' of the adjacent slide member 28 cooperate to define a chamber 40 which constitutes a protective housing for spring ribbon 33.

As best seen in FIGURES 2 and 4, guide members 39 may be of duplex character for accommodating the slide members 28 of both upper and lower window sash. It will be particularly observed that the slide members 28 for upper sash 5 are somewhat relatively deeper extent, that is, the side flanges thereof are of greater width than those associated with bottom sash 6 for purposes presently appearing.

With reference to FIGURE 1 it will be seen that the coil of counter-balance springs 34 for lower sash 6 are presented suitably within jambs 1, 1' slightly downwardly of the upper end of such sash 6 when in closed condition; in which state the ribbons 33 will be uncoiled or extended. The coils of the spring counter-balances as indicated at 34' for upper sash 5 will be located within jambs 1, 1' slightly upwardly of the lower end of such sash 5 when in closed condition; in which state the said ribbons 33 thereof will be coiled or in non-extended state.

Jambs 1, 1' are provided with recesses 41 for receiving the coils of counter-balanced springs 34 for the upper and lower sashes 5, 6, respectively. With reference now being made to FIGURES 5, 6 and 7, the disposition of said coils 34 within their related recesses 41 will be described but, for illustration only, as presented for coaction with lower sash 6. FIGURE 5 illustrates coil 34 with its ribbon 33 in fully extended state so that the associated window sash 6 is in downward closed condition as shown in FIGURE 1. Coil 34 is supported upon the upper surface 42 of a mounting member 43 having an upper portion, as indicated generally at 44, for reception within the lower portion of the related recess 41 so as to give adequate support to top surface 42. The inwardly directed portion of mounting member 43 constitutes a faceplate 45 which extends downwardly below opening 41 in confrontation to web 35 of the opposed slide member 28 and being secured to the inwardly directed face of the proximate side jamb 1, 1' as by screws 46. Top surface 42 of mounting member 44 is slightly upwardly inclined or arcuated at its inwardly directed edge portion, as at 47, so as to inhibit inadvertent inward movement of the associated coil 34. Said mounting members 43 may obviously be formed of plastic, metal or the like. It will, of course, be apparent that guide members 39 are suitably cut away to provide openings 48 for registration with recesses 41.

Fixed at its ends within flanges 36, 36' of each guide member 35 for extension transversely therebetween proximate the upper end of each guide member 35 is a pin 49 about which is engaged the eyelet-forming ends 50 of the transversely spaced-apart legs 51 of a latch member, indicated generally at 52 (see FIGURES 5 and 9). Said latch member 52 is suitably formed from spring steel and incorporates an upper portion having a laterally outwardly extending tongue 53 which is turned upwardly at its outer extremity, as at 54 , and an inwardly laterally extending tongue 55 which is turned upwardly at its inner end extremity, as at 56, for reception within a complementarily formed trough-like recess 57 in the upper outer edge of the related sash 6. It will be seen that tongue 55 extends over web 35 of slide member 28 which latter terminates in substantial alignment with the edge of said recess 57. Legs 51 of latch 52 are of general arcuate form bulging laterally outwardly and thence inwardly. The length and contour of legs 51 are such that when tongue 55 is disposed within recess 56, a secure locking relationship will develop so as to maintain slide members 35 in engaged relationship to the related sashes 5, 6 for movement therewith.

In order to disengage sashes 5, 6 from their slide members 35, the user may manipulate extremity 56 of tongue 55 to overcome the engagement between said tongue 55 and recess 57 to thereby allow outward rocking of latch 52 about pin 49 and thereby remove said tongue 55 from engaged condition (see FIGURE 6). By such action, sashes 5, 6 are thus disengaged from the upper portions of their slide members 35. As shown in FIGURE 6, the outer end of tongue 53 will project into a relatively small recess 58 provided in the proximate side jamb; there being an aligned opening 59 in guide member 39. As sashes 5, 6 are thus unlocked from the upper portions of the related slide members 35, counter-balance springs 34 through their inherent bias will effect a slight upward pulling upon said slide members 35 thus causing the outer ends 54 of tongues 53 to be brought into abutment against the upper surfaces or recess 58 and to thereby maintain said latch members 52 securely in unlocked condition (see FIGURE 7).

It will now be seen that upon unlocking of latch members 52, sashes 5, 6 are then freed for swingable movement about the pivot axis through their lower transverse portions created by rivet-like fasteners 23. Thus, in view of the foregoing, it will be seen that in order to tilt lower sash 6 inwardly, the same must first be placed in closed condition (FIGURE 1); the associated latch members 52 are then rocked from the locked condition shown in FIGURE 5 to the unlocked condition shown in FIGURE 6. By reason of fasteners 23 and fingers 16, sash 6 at its lower end portion is then pivotally mounted upon the lower ends of its associated slide members 35. Window

sash 6 may thus be swung inwardly through an arc of substantially 90° and thereby present its normally exterior face (FIGURE 2) for convenient access as for cleaning, repair or the like, which may be effected from the interior of the building.

Upper sash 5 may also, if desired, be simultaneously tilted into like, downward position. Sash 5 is firstly moved downwardly into substantially full open condition whereupon its counter-balances 34' will be in extended condition and whereat its latch members 52 will be presented in substantial alignment with the related jamb recesses 58. Thereupon latch members 52 are swung outwardly to effect disengagement between sash 5 and its related slide members 35 which latch members are engaged within the related recesses 58 whereupon said sash 5 may then be swung downwardly and inwardly about the pivot established between the related fasteners 23 and fingers 16. By reason of the differential between the locations of the jamp openings 58 for latch 52 of the lower sash and those for the latch members of the upper sash, as well as by reason of the differential between the locations of the respective counter-balance coils, said upper sash when rocked or tilted will be disposed in overlying relationship to lower sash (FIGURE 2) so as to avoid any inadvertent damaging contact therewith. Also the relatively greater depth of the slide members 35 associated with upper sash 5 conduces to further lack of interference between the sash during tilting, and in tilted condition.

Thus, through the foregoing invention, an individual may very simply manipulate window sash 5, 6 for rendering the exterior faces thereof most conveniently available for treatment from a comfortable and protected interior station. The unlocking and tilting of said sash may be accomplished without the services of highly skilled individuals and obviously the return of such sash to operative position is as easily effected. The user need merely sequentially tilt window sash 5 and window sash 6 upwardly, manipulate the related latches 52 so as to bring same into engaged relation with the window sash and the operation is then completed. By reason of the simplicity of the construction herein shown, it will be seen that if desired, sash 5, 6 may be removed from window A in a most facile manner for, after disengaging latches 52, the user need merely pull the sash toward the user as the same will readily slide off fingers 16 and thus be bodily withdrawn from the window frame.

Referring no wto FIGURES 14, 15 and 16, another form of counter-balance mounting indicated generally at 60 is illustrated which incorporates a front portion 61 and a faceplate portion 62 which latter are substantially similar to the corresponding portions of mounting member 43 described hereinabove. The upper surface 63 of said mounting 60 is provided with cut-outs or recesses 64, 65 in the central portions of its inward and outward edges respectively for purposes presently appearing.

With attention now being directed to FIGURES 17, 18 and 19, C generally indicates a counter-balance saddle comprising a body portion 66 having depending from its undersurface fingers 67, 68 respectively, which are dimensioned for snug reception within recesses 64, 65 respectively of mounting 60 so as to maintain said saddle C against inadvertent displacement and with the same being thus disposed upon the upper surface 63 of said mounting 60. In the inward portion of the upper surface of saddle 60 there is provided an arcuated recess 69 extending the width of said saddle C and being on a suitable radius for accepting the coil of the counter-balance 34 so as to retain same against undesired shifting.

FIGURES 20, 21 and 22 illustrate another form of counter-balance saddle being indicated generally D and having a body portion 70 and fingers 71, 72 which correspond to body 66 and fingers 67, 68 of saddle C above described. On the inner portion of its upper surface saddle D is provided with a central recess 73 which opens through its inner end and is of such cross section as to snugly accept the coil of the counter-balance 34 thereby assuring proper stabilization of same is operative position with adequate side supports as at 74, 74' being presented. Thus by the above described structure, counter-balances 34 are easily placed in operative position; are securely mounted therein and are as readily withdrawn so as to occasion the user no difficulties in this regard and to allow for full reliance upon proper functioning at all times.

As may best be seen in FIGURE 2, sashes 5, 6 may be provided on their lateral surfaces with suitable weather stripping indicated at *w* for effecting an air-proof seal with the confronting portion of the adjacent slide members 28.

Referring now to FIGURES 23 and 24, there is illustrated a sash counter-balance of the spring and pulley type, as indicated generally at C, for use with the sashes 5, 6 of window A. It is to be understood that the same elements of window A hereinabove described are referred to by the same reference numerals. Thus, although each sash 5, 6 is provided with a sash counter-balance C, the description of same will be made with reference to upper sash 5 for exemplary purposes as the operation of the same with respect to each sash 5, 6 is in all respects similar.

Sash 5 is provided with a slide member 28 for slideable disposition within related guideway 39 which latter is affixed to window frame jambs 1, 1' in the same manner as set forth above. Said slide member 28 is thus pivotally engaged at its lower end to the confronting side face of the respective sash, as by a pivot pin 80, and with its upper end being detachably engaged by a latch member 52. Affixed in the related jamb 1, 1' in the portion thereof proximate the lower end of sash 5 when in window-closed or full upward condition, is a screw 81, the head of which projects into the chamber 40 and has engaged about its neck one end of a cable 82 which is led about a horizontal roller 83 journalled at its ends in suitable bearings formed in flanges 36, 36' of slide member 28, as at 84, 84' which is adapted for effecting change of direction of movement of said cable during operation. Cable 82 constitutes a component of the spring and pulley sash counter-balance C, which cable is suitably directed about vertically arranged pairs of companion pulleys, as at 85, 85', 86, 86'; the lower pulleys being mounted upon a pin 87 fixed in web 35 of slide member 28; while said upper pulleys 86, 86' are carried upon a pivot pin 88 fixed in the sides of a bracket 89 which may be formed of identical stampings, as at 90, 90'. Engaged to the upper end of bracket 89 is the lower end of an extension spring 91; the upper end of which is secured upon a mounting pin 92, the inner end of which is secured, as by threading or the like, in web 35 of slide member 28.

It will thus be seen that the spring and pulley arrangement C is accommodated within chamber 40 and, hence, will at all times be invisible.

The operation of spring and pulley arrangement C should be apparent since with upper sash 5 fully raised, a slight tension will be placed upon spring 91 with attendant relative extension of the distance between lower pulleys 85, 85' and upper pulleys 86, 86'; (as shown in FIGURES 23 and 24); while upon downward travel of said sash 5, a relative shortening of the distance between lower pulleys 85, 85' and upper pulleys 86, 86' will occur together with the development of increased tension in spring 91. The counter-balance C with lower sash 6 will thus be arranged to operate so that maximum tension will be placed upon spring 91 therewith when said sash 6 is in lowered or closed condition.

The said spring and pulley counter-balance C, as used with window A, permits equal facility for tilting-in purposes of the related sashes 5, 6 in the same manner as described hereinabove with respect to the utilization of the spring ribbon counter-balance 34.

It should be understood that changes and modifications in the formation, construction, and arrangement and combination of the several parts of the tilt-in window sash

may be made and substituted for these herein shown and described without departing from the nature and principle of my invention.

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

1. For use with a window having a frame incorporating side jambs, the improvement comprising a sash for disposition between said jambs and having side components with lateral margins confronting said jambs, a slide member carried on the lateral margins of said sash being movable therewith during travel of the latter relative to the jambs, a guide member fixed on each jamb, each slide member slideably engaging the confronting guide member, latching means provided adjacent the upper side ends of the sash being movable between a first position wherein the upper portion of the related slide member is locked to said sash and a second position wherein the upper portion of the related slide member is freed from engagement with said sash and is locked to the adjacent jamb, means pivotally engaging the lower ends of said slide members to the lower marginal portions of said sash whereby when said latching means are in said second position said sash may be swung with relation to said slide members, and resilient counter-balancing means operatively connecting said jamb and said sash.

2. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 1 and further characterized by said slide members being of general channel form opening toward the related guide members to define a chamber therewith, each guide member and its related jamb having aligned openings, said resilient counter-balancing means comprising a coil spring counter-balance disposed within said openings and having a free end engagable to said means pivotally engaging the lower ends of said slide members to the lower lateral margins of said sash within said chamber.

3. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 2 and further characterized by said pivot means comprising a elongated fastener presented in axial normal relationship to the related slide member and having a portion received within said chamber, said counter-balance coil spring being of ribbon type and having its free end engaged to the portion of said fastener within said chamber.

4. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 2 and further characterized by a mounting member for said coil spring being secured upon the sash directed face of said guide member and jamb and having a portion extending into the said aligned openings therein.

5. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 4 and further characterized by a saddle member disposed upon said mounting member for receiving said coil, means provided on said saddle member for prohibiting accidental displacement of said coil.

6. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 5 and further characterized by said saddle having an upwardly opening arcuated recess for supporting said coil spring.

7. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 5 and further characterized by said saddle having an upwardly and inwardly opening recess and lateral and end detent vertical surfaces for providing lateral support for the received coil spring.

8. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 1 and further characterized by said slide members being of general channel form for opening toward the related guide member so as to define a chamber therewith, said counter-balancing means comprising a spring and pulley sash counter-balance provided within each such chamber and being fixedly engaged at its lower end to the proximate jamb and at its upper end to the related slide member.

9. For use with a window having a frame incorporating side jambs, the improvement comprising a sash for disposition between said jambs having side components with lateral margins confronting said jambs, a slide member mounted on the lateral margins of said sash, a guide member mounted on each jamb for slideably receiving said slide member for vertical reciprocal movement of said sash within said jambs, said slide members being of general channel form for opening toward the related guide member so as to define a chamber therewith, means pivotally mounting the lower lateral portions of said sash to the lower ends of said slide members, each guide member and its related jambs having aligned openings, a coil spring counter-balance disposed within said openings and having a free end secured to said sash pivot means, means provided adjacent the upper end of the sash for latchable engagement with the slide members so as to allow for optional disengagement therebetween comprising a latch member mounted upon the related slide member and having a tongue provided above the upper end of the related slide member, means provided on said sash for engaging said tongue, said guide member and jamb having aligned recesses, and means provided on said latch member for extension into said recesses when said latch member is in sash-disengaged position.

10. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 9 and further characterized by said pivot means comprising an elongated fastener presented in axially normal relationship to the related slide member and having a head portion received within said chamber, a finger carried on said head within said chamber and depending from the outer end thereof, said counter-balance coil spring being of ribbon type and having its free end engaged to said finger within said chamber.

11. For use with a window having a frame incorporating side jambs, the improvement comprising a sash for disposition between said jambs, and having side components with lateral margins confronting said jambs, a slide member mounted on the lateral margins of said sash, a guide member mounted on each jamb for slideably receiving said slide member for vertical reciprocal movement of said sash within said jambs, said slide members being of general channel form for opening toward the related guide members so as to define a chamber therewith, means pivotally mounting the lower lateral portions of said sash to the lower ends of said slide members, each guide member and its related jambs having aligned openings, a coil spring counter-balance disposed within said openings and having a free end secured to said sash pivot means, means provided adjacent the upper end of the sash for latchable engagement with said slide members so as to allow for optional disengagement therebetween comprising a latch member having a leg portion, said leg portion being disposed within the upper end of the adjacent chamber, means swingably mounting the lower end of said leg portion upon said slide members, a first tongue member provided on said latch member for extension above the related slide member and toward the sash, means provided on said sash for receiving said first tongue member when said latch is in locked condition, a second tongue member provided on said latch and extending in direction opposite that of said first tongue member, and means provided on the adjacent jamb for receiving said second tongue member when the latch is in unlocked condition whereby said sash may pivot about its lower end with respect to said slide member.

12. For use with a window having a frame incorporating side jambs, the improvement as defined in claim 11 and further characterized by said latch member having resiliency and said first tongue being of such extent that when said latch member is rocked into sash unlocked condition, said first tongue will be removed from the path of movement of said sash.

13. For use with a window having a frame incorporating side jambs, the improvement comprising a sash

for disposition between said jambs and having side components with lateral margins confronting said jambs, a slide member carried on the lateral margins of said sash, a guide member fixed on each jamb, each slide member slideably engaging the confronting guide member, means for latchably engaging the upper ends of said slide members to said sash to allow optional disengagement therebetween, each side component of said sash having on its lower end lateral margin portion a recess extending in a direction longitudinally of said component said recess being laterally outwardly opening and extending from the lower end of said sash to a point spacedly thereabove, a plate mounted upon lateral margin of said sash for partial enclosure of said recess, the lower margin of said plate being presented spacedly from the adjacent lower end of the related side component, a finger slideably received within said recess and extending beyond said plate, said finger having an opening at its extended portion, the adjacent slide member having an aligned opening, and a fastener element extending through said aligned openings for effecting securement between said slide member and the adjacent finger, means adapting said fastener element

for permitting relative swingable movement between said finger and said slide member whereby upon disengagement of the upper end of said slide members from said sash and upon downward swinging of said sash about the axes of said fastener elements said sash may be withdrawn by effecting relative slideable movement of said fingers withdrawingly from the related recesses.

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KENNETH DOWNEY, *Primary Examiner.*

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