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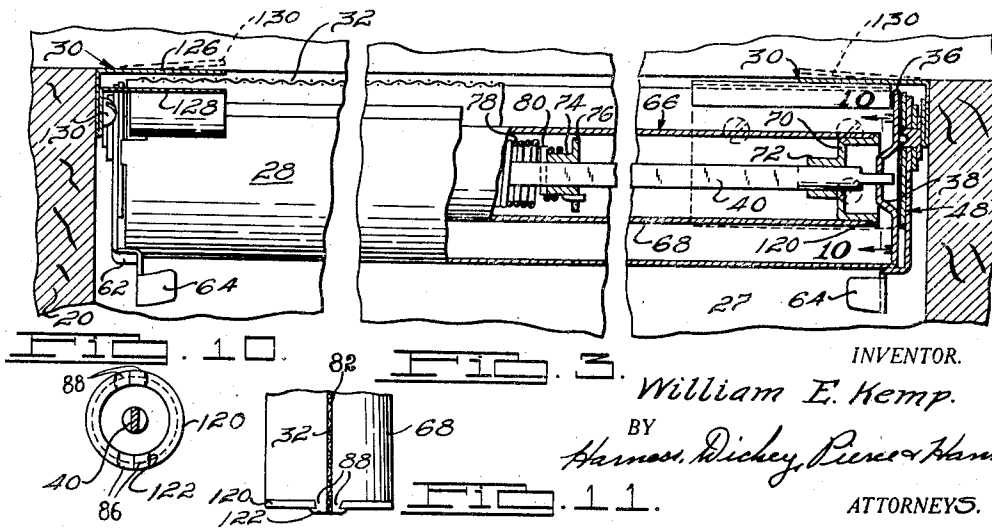
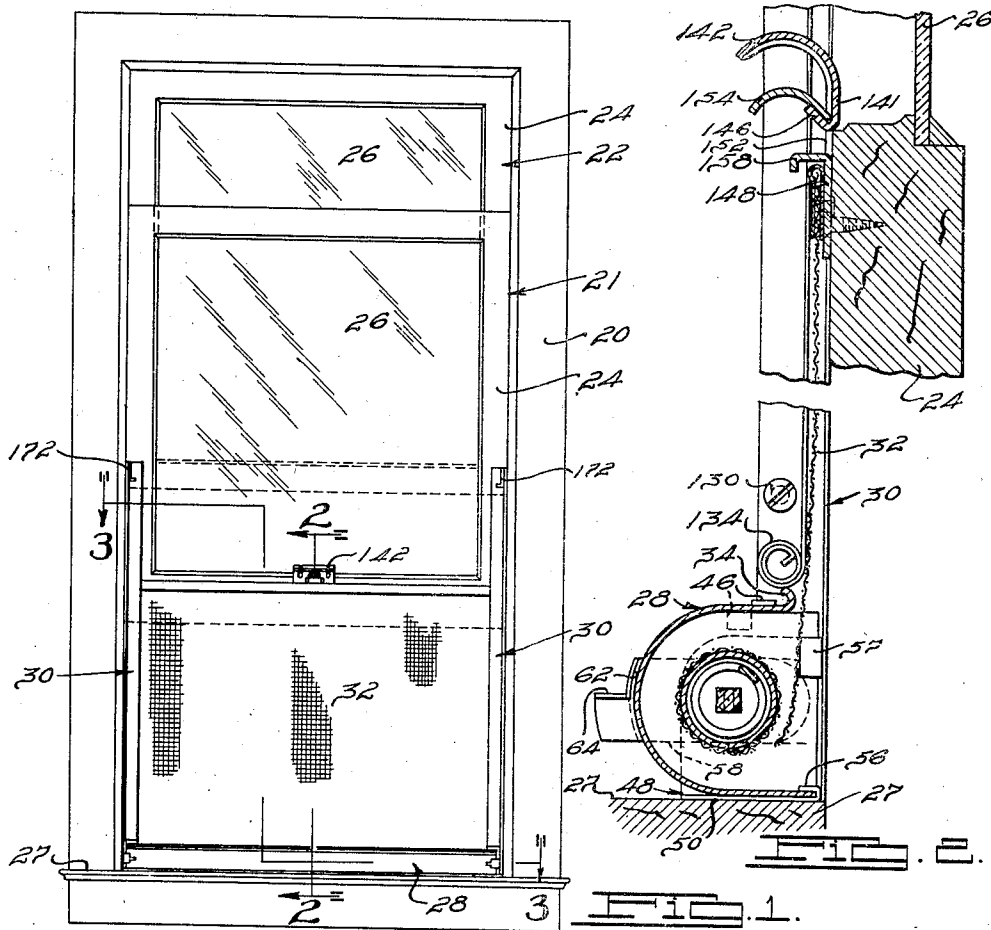
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2,107,755

ROLL SCREEN STRUCTURE

Filed June 22, 1934

2 Sheets-Sheet 1



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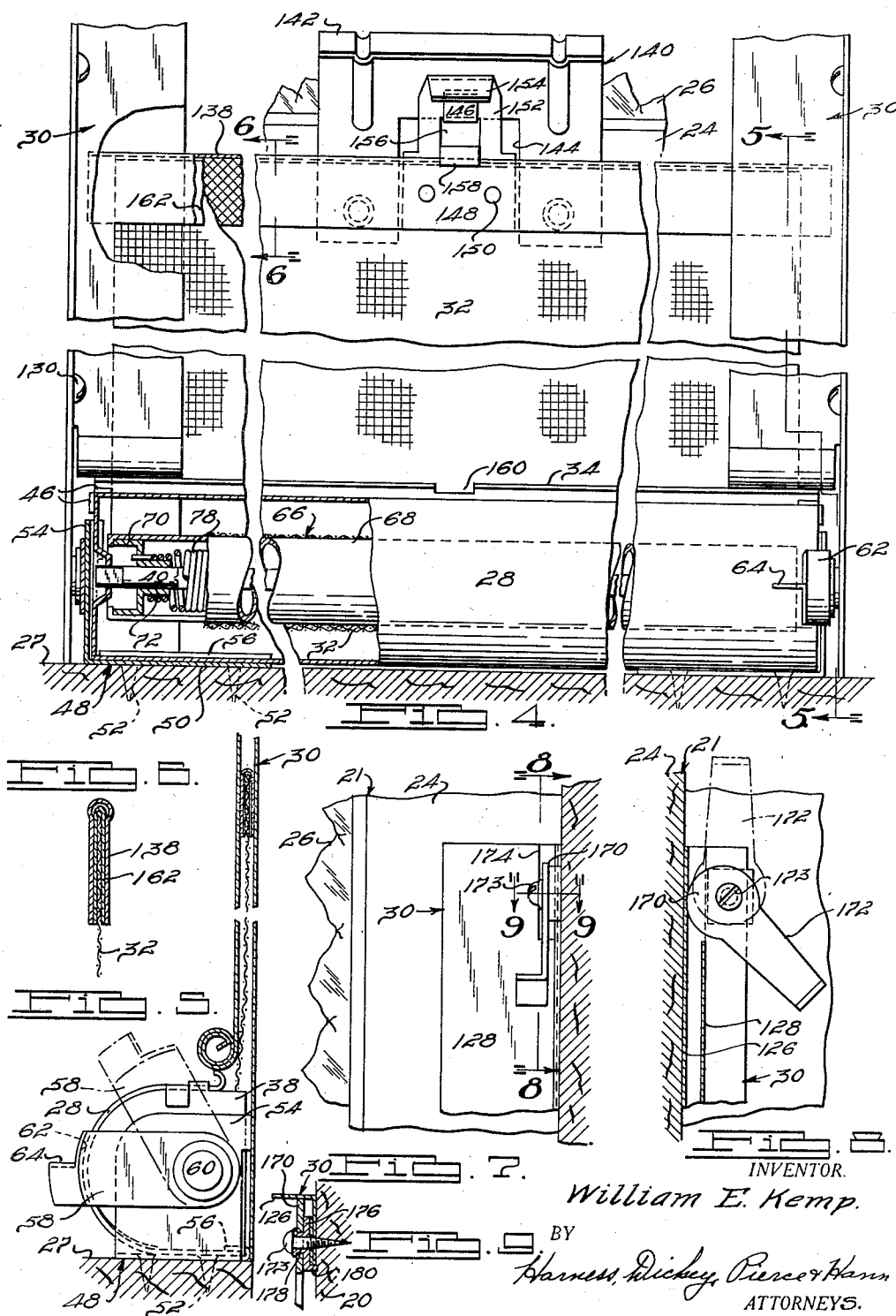
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2. Sheets-Sheet 2



UNITED STATES PATENT OFFICE

2,107,755

ROLL SCREEN STRUCTURE

William E. Kemp, Detroit, Mich.

Application June 22, 1934, Serial No. 731,808

14 Claims. (Cl. 156—39)

This invention relates to roll screens of the type employed in residences and other structures for the purpose of preventing insects from entering through opened windows, the principal object being the provision of a structure of this type that is simple in construction, efficient in operation and economical to manufacture, install and operate.

Other objects of the invention include the provision of a roll screen structure including a roller housing that may be detached from operative relation with respect to the window and its frame in a minimum of time and with a minimum of effort; the provision of a roll screen structure including a pair of securing clips or brackets adapted for permanent securement in connection with the frame of a window and so constructed and arranged as to removably receive and retain a roller housing for the screen structure; the provision of a construction as above described in which the clips or brackets for removably receiving and retaining the roller housing are provided with eccentric clamping members engageable with the housing to normally maintain it in proper operative relation with respect to the window frame.

Other objects of the invention include the provision of a roll screen structure for a window including a pair of guides for guiding the screen in its movement to and from the roll therefor and which guiding members are of resilient character and are so constructed and arranged that the outer edges thereof are resiliently pressed into contact with the window sash whereby to seal the connection between the screen structure and the sash and at the same time provide sufficient friction to prevent the torsion of the screen roller spring from causing the window to be lowered by such torsion.

Other objects of the invention are the provision of a roll screen structure in which the extensible edge of the screen is provided with a bar connected at its center only with the window sash whereby equalization of the strains and stresses in the screen occasioned by raising and lowering the screen with a window will be equalized at all times; the provision of a novel form of releasable catch cooperating between the extensible edge of a roll screen and a window sash permitting equalizing movement of the extensible edge of the screen and permitting the screen to be secured to the window sash so as to be operable simultaneously with the window in its raising and lowering movements; and the provision of a connecting member between the ex-

tensible edge of a roller screen and a window sash that is optionally releasably engageable with the window sash or the upper edge of the housing for the screen roller.

Another object is the provision of a novel means in connection with the frame of a roll screen operable to clamp a window sash against movement in any desired adjusted position and unaffected in its clamping effect by any force applied to either raise or lower the sash while so clamped.

The above being among the objects of the present invention, the same consists in certain novel features of construction, combinations of parts and steps of operation to be hereinafter described with reference to the accompanying drawings, and then claimed, having the above and other objects in view.

In the accompanying drawings which illustrate suitable embodiments of the present invention and in which like numerals refer to like parts throughout the several different views,

Fig. 1 is a front elevational view of a window frame and window to which a roll screen is shown applied, the window being shown in partly open position.

Fig. 2 is an enlarged, fragmentary, partially broken, vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged, partially broken, partially sectioned plan view taken on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged, fragmentary, partially broken, partially sectioned front elevational view of the roller screen construction showing certain of the parts in greater detail.

Fig. 5 is a fragmentary, partially broken, vertical, sectional view taken on the line 5—5 of Fig. 4.

Fig. 6 is an enlarged sectional view taken transversely through the equalizer bar or edge member for the extensible edge of the screen, taken on the line 6—6 of Fig. 4.

Fig. 7 is an enlarged, fragmentary, front elevational view of the means provided for clamping the window against movement.

Fig. 8 is a vertical, sectional view taken on the line 8—8 of Fig. 7.

Fig. 9 is a fragmentary, horizontal, sectional view taken on the line 9—9 of Fig. 7.

Fig. 10 (sheet 1) is an end view of the spring roller shown in the preceding figure and taken on the line 10—10 of Fig. 3.

Fig. 11 is a fragmentary plan view of the end of the roller shown in Fig. 10.

Referring to the drawings, a window frame is indicated at 20 which encompasses the windows indicated generally at 21 and 22 respectively each of which includes a sash 24 and a glass 26. The frame 20 includes the usual sill 27. The window frame and windows shown are of conventional construction and the windows are vertically slidable in the frame in accordance with conventional practice. A roll screen formed in accordance with the present invention is shown as including generally a roller housing 28 secured to the window sill 27 inside of the window 21, guide members 30, one fixed to each side of the window opening in the frame 20, a flexible screen 32 removably secured at one end to the lower edge of the inner window 21 and adapted to be rolled upon or unrolled from a suitable roller within the housing 28 which will hereinafter be more fully described.

The housing 28 includes a main body portion of generally U-shaped section formed from sheet metal and positioned with its open face toward the outside of the window as best indicated in Fig. 2. As indicated in this figure the upper outer marginal edge of the housing 28 is reversely bent as at 34 to provide a round, smooth edge for contact with the screen 32 during certain positions of the mechanism and to provide a seal between this edge of the housing 28 and the screen 32. As indicated best in Fig. 3, the housing 28 is provided with end walls 36 the central portions of which are inwardly depressed as at 38 and are centrally apertured for non-rotatable reception of the flattened end portion of the roller shaft 40 which will hereinafter be more fully described.

The housing 28 and the parts carried thereby are removably secured in position relative to the window frame 20 in the following manner. A clip or bracket member indicated generally at 48 is secured to the window sill 27 at either side of the window opening. As indicated in Fig. 4, each bracket 48 comprises a flat horizontal portion 50 which seats against the window sill and is secured thereto as by screws 52 and a vertically extending portion 54 which lies in parallelism and slightly spaced relation with the corresponding side face of the window frame 20. As indicated in Fig. 2, the forward edge of the bottom portion 50 of each bracket 48 is upwardly and then reversely bent upon itself as at 56 to form a hook in which the corresponding portion of the forward edge of the lower wall of the housing 28 is removably received. A similar rearwardly facing hook 57 is also formed at the outer edge of the side member 54 for hook-like engagement with the corresponding end wall 36 of the housing 28. The laterally outer end portion of the hook 56 is cut away so as to prevent interference of the end walls 36 of the housing 28.

As best indicated in Fig. 5, an arm 58 is pivotally secured to the laterally outer face of each side member 54 of each bracket 48 by means of a rivet such as 60 or other suitable means. The axis of the rivet 60 is located outwardly with respect to the window from the axis of the spring shaft 40 previously mentioned, it being necessary in any case that it be eccentric to the curvature of the rear face of the housing 28. The free end portion of each lever or arm 58 is formed to provide an axially inwardly projecting contact face 62 and a thumb plate 64, the relation of the parts being such, as best indicated in Fig. 5, that when the arm or lever 58 is swung upwardly about its pivotal axis the surface 62 is carried

upwardly and out of contact with the housing 28 whereas when it is swung downwardly the surface 62 engages the rear face of the housing 28 and acts to press the housing outwardly into snug engagement with the bottom of the hooks 56 and 57. The piece 64 permits the arm 58 to be firmly pressed downwardly to effect the desired clamping engagement therewith. By swinging the arm 58 upwardly to the position indicated in dotted lines in Fig. 5, the housing 28 and all parts carried thereby may be easily and quickly rearwardly removed from engagement with the brackets 48 and association with the window frame 20 and conversely the housing 28 may be replaced in the position indicated in Fig. 5 and, upon pressing the arms 58 downwardly, may be quickly and firmly clamped in such position. By accurately locating the brackets 48 relative to the window sill 27 in the first instance, the housing 28 may be always quickly and accurately re-located with respect to the windows and window frames at any desired time.

Within the housing 28 is mounted the roller indicated generally at 66 to which the lower end of the screen 32 is secured and upon which the screen 32 is adapted to be rolled and/or unrolled during movement of the window 21. This roller and the method of fastening the screen thereto forms no part of the present invention but constitutes the subject matter of my co-pending application for Letters Patent of the United States for improvements in Roller screen construction, Serial No. 73,824, filed April 11, 1936. The roller 66 comprises an outer cylindrical sheet metal body member 68 sleeved upon end members 70 which, as indicated in Figs. 3 and 4, are identical with each other and are fixed against rotation with respect to the body 68 of the roller. The members 70 are of generally cup-shaped formation and are each centrally provided with an inwardly extending sleeve portion 72 forming a bearing for the corresponding end portion of the roller 66. As indicated best in Fig. 3, between its end portions which are journaled in the sleeves 72, the shaft 40 is of square section and between its ends non-rotatably receives thereon a cylindrical member 74 provided with a peripheral flange 76. A coiled torsion spring 78 surrounds the shaft 40 within the roller 66 and the inner end of the spring is projected through an opening in the flange 76 and is maintained against rotation with respect thereto. A pin 80, as indicated in Fig. 3, is preferably projected through the shaft 40 for abutment with the member 74 to prevent it from shifting axially of the shaft 40 beyond a desired position under the tension of the spring 78.

As indicated in Fig. 4, the opposite end of the spring 78 is projected through a suitable opening in the corresponding end member 70 and is thereby locked against relation rotation with respect to the roller 66. It may be noted, as indicated in Fig. 4, that the outer end of the spring 78 is reduced in diameter so as to be relatively closely received upon the corresponding sleeve 72, thereby centrally guiding it with respect to the shaft 40 and, as indicated in Fig. 3, the inner end of the spring 78 is similarly reduced in diameter and is relatively closely received upon the member 74 for the same purpose.

It will be understood, of course, that the spring 78 is placed under an initial tension so that in operation it will insure the screen 32 being completely rolled upon the roller 66 when the window 21 is lowered and, as is obvious, when the

window 21 is raised the roller 66 will be rotated relative to the shaft 40 and will place the spring 78 under a torsional stress tending to resist further unrolling of the screen 32.

Referring particularly to Fig. 11, it will be noted that the body 68 of the roll is split along a line 82 parallel to the axis of the roll. The body 68 is preferably formed in the same manner that butt welded tubing is formed, that is, a suitable length of a strip of metal rolled up into a tube so as to bring opposite longitudinally extending edges into abutting relation with each other, such edges preferably abutting each other with a fair amount of pressure, in the present case preferably between 3 and 6 pounds to the inch in length.

In securing the screen 32 to the body 68 of the roll 66, the abutting edges along the line 82 are caused to be expanded or separated, the edge of the screen 32 is inserted between the spaced edges, and then the edges are allowed to again contract toward their normal abutting position and in which positions they will then firmly clamp the edge of the screen 32 between them. Preferably, a small amount of the edge is allowed to project into the interior of the body 68 and is bent over therein to further prevent possibility of pulling the screen 32 out of engagement with the body 68. By this means a quick and exceedingly efficient means is provided for securing the screen 32 to the roller.

Referring to Figs. 10 and 11, it will be noted that the outer end of the end member 70 for the roller 68 is provided with a radially outwardly projecting flange 120, against which the corresponding end of the body member 68 abuts. At approximately diametrically opposite points flange 120 is cut out and in these cut-out portions the lugs 86 and 88 formed to project axially beyond the main body portion 68 on either side of the line of split 82 thereof and at a point approximately diametrically opposite thereto are received, and the outer ends of the lugs are peened over the axially outer face of the flange 120 as at 122 in Fig. 11 in order to prevent axial displacement between the end member 70 and the body 68 of the roller 66. Likewise, this engagement of the lugs and the flange 120 locks the end member 70 to the body 68 for equal rotation therewith. As an added feature, it will be noted that the lugs 88 are preferably tapered on their inner face and the corresponding notch or recess in the flange 120 is preferably so proportioned that, as indicated in Fig. 11, when the corresponding end member 70 is forced into the end of the body 68 the sides of the notch will engage the tapered sides of the lugs 88 and will tend to further contract the abutting edges of the body 68 and thereby more firmly clamp the screen 32 therebetween. For this reason one of the notches is preferably held to reasonably close limits and the notches are offset from a true diameter as shown, or otherwise formed so that they will receive the lugs 86-88 in one position only.

The guides 30, as best illustrated in Fig. 3, comprise a pair of angle members 126 and 128, respectively, the legs of which extend in a plane parallel to the window 26 and the bases of which contact with each other and are secured to the side wall of the window opening in the frame 20 by screws such as 130. While these guides 30 may be formed of two separate parts, for the sake of economy, appearance and general efficiency, they are preferably formed from a single

strip bent to the shape shown. The legs of the angle members 126 and 128 extend in parallelism to the plane of the window 26 and are spaced from each other by a distance amply sufficient to receive the edge of the screen 32 therebetween, and they project inwardly from the side of the window opening a sufficient distance to provide a suitable amount of overlap with respect to the corresponding edge of the screen 32 over reasonable variations in the width of windows from a standard width. As particularly brought out in Fig. 3, in initially forming the guides 30 the leg of the outer member 126 is preferably formed so that its free end tends to project outwardly as at 130 beyond a true perpendicular relationship with respect to the foot of the angle, and in securing the guides 30 to a window frame they are pressed outwardly against the sash of the lower window so as to cause the leg of the outer angle 126 to be bent inwardly into or at least toward the plane of the window as indicated in full lines in Fig. 3. The material from which the guides 30 are made is preferably relatively light and spring-like so that, while the pressure against the window sash caused by bending inwardly the leg of the outer angle 126 will somewhat increase the frictional resistance to raising and lowering the window, it will not unnecessarily restrict the ease of raising and lowering the window 26. In any event, in securing the guides 30 in place the screws 130 may be so located as to obtain any desired amount of contact between the leg of the angle 126 and the window sash and/or degree of friction between them. By causing the guides 30 to exert a desired amount of frictional resistance to raising and lowering of the lower window 26, the possibility of the spring 78 within the roller 66 exerting a sufficient amount of pull on the window to inadvertently close it may be definitely eliminated. Additionally, because of the spring-like contact between the guides and the window sash a weatherstrip effect is obtained preventing circulation of air between the window sash and the window frame along the length of the guides in the winter time.

The guides 30, as indicated best in Fig. 1, extend from the window sill to a sufficient height to properly guide the screen 32 when the inner window 26 is in fully raised position. The lower ends of the guides 30 extend all the way down to the window sill 27 and, in order to permit the housing 28 to be positioned outwardly of the window opening as close to the sash of the inner window 21 as possible, the leg of the inner angle 128 is severed from the foot portion thereof from the bottom end thereof to a point slightly above the upper face of the housing 28, and this severed strip is rolled up into a coil 134, best indicated in Fig. 2, and which coil is adapted to resiliently press against the upper curved edge 34 of the housing 28. This forms an effective seal between the angle 128 and the housing 28.

In order to secure the screen 32 to the inner window 21 so that the screen will be raised and lowered with the window, the free end of the screen 32 is provided with a cross bar 138 secured thereto and the end portions of which are received by and guided in the guides 30 along with the edges of the screen 32. Preferably, the ends of the cross bar 138 are extended beyond the corresponding edges of the screen 32, as illustrated best in Fig. 4, so as to prevent such edges of the screen from coming into direct contact with the bottom of the channels formed within the guides

30. The length of the cross bar 138, however, is preferably such as to allow for usual tolerances in the standard width of windows.

As also best illustrated in Figs. 2 and 4, a handle member 140 is secured to the lower cross member of the sash 24 for the window 21 and its upper edge is first outwardly turned as at 141 and then inwardly turned as at 142 to provide a convenient grip for the fingers of the operator. The lower central portion of the handle member 140 is partially cut away to form an opening 144 and a portion of the metal thus cut away is bent upwardly and inwardly to provide a hook 146 positioned below and in spaced relation with respect to the hook 141-142. A plate member 148 is centrally secured to the outer face of the cross member 138 as by means of rivets 150 and the member 148 is of a width less than the width of the opening 144 in the handle 140 so as to be receivable therein. The member 148 is provided with an upwardly projecting portion 152 the upper marginal edge of which is bent as at 154 into the same general contour as the hook 141-142 so as to enable it to be grasped by the fingers of an operator. The metal of the portion 152 is severed on three sides and the enclosed metal bent out to form an opening 156, the metal thus bent out being directed forwardly and downwardly about its lower edge to form a supplementary hook 158. The opening 156 is of greater width than the hook 146 on the main handle 140 so that the hook 146 may be passed through the opening 156 to engage the undersurface of the hook 154 and thereby secure the upper edge of the screen against downward displacement with respect to the sash of the window 21.

As will be apparent, an operator may grasp the portion 154 and, pulling upwardly and outwardly, cause the upper edge of the cross bar 138 to pivot outwardly relative to its lower edge, releasing the hooks 146 and 154 and thus permit the screen to become lowered independently of movement of the window, in which case when the screen is in fully lowered position the hook 158 will engage the rolled upper edge 34 of the housing 28 to limit further withdrawal of the screen 32 into the housing 28. Preferably, the rolled edge 34 is centrally notched as at 160 and best shown in Fig. 4 so that the hook 58 will become located therein when the screen is lowered and maintain the free edge in central position with respect to the housing 28. It may be noted that the relation of the hooks 142 and 154 is preferably such that in releasing them they engage each other and thus require the pivoting movement about the lower edge of the bar 138 previously described, and that further, sufficient pressure will have to be applied to the hook 154 to cause the cross bar 138 to spring outwardly at its center to release the hook 154 from the hook 146, thereby making it impossible for the screen to be inadvertently disengaged from the window or impossible for a young child to effect such disengagement. Obviously, where this effect is desired the bar member 138 will be constructed of sufficiently thin and resilient material to permit the effect to be attained.

It is to be particularly noted that this method of connecting the free end of the screen 32 to the window includes a connection at the center only of the window and the connection is such that the bar 38 may pivot in a plane parallel to the plane of the window 21 about its point of connection with the window. By means of this construction the bar 138 acts in effect as an equal-

izing bar for the screen 32 and it may pivot in either direction from its normal position to equalize the strain between opposite sides of the screen 32 due either to hard spots in the screen, through lateral shifting of the window or from any other cause, and it has been definitely shown that, because of this equalizing construction, the life of the screen 32 is substantially doubled over constructions in which the bar 138 may not thus pivot to equalize such strain.

The construction also permits equalizing movement of the bar 138 when the screen is wound on the roller so as to take care of inequality in the diameter of the screen as it rolls up on the roller. By this construction the stress between all of the vertical strands of the screen is equalized to a great extent, thus preventing localized stresses in individual strands which might otherwise reach a sufficient value to break such strand and thereby cause early and premature disintegration of the screen.

The construction of the cross bar 138 is in itself not a feature of the present invention but forms the subject matter of my co-pending application for Letters Patent of the United States for improvements in Edge strip for screen, Serial No. 73,823, filed April 11, 1936. As best indicated in Fig. 6, the cross bar 138 is shown as being formed from a single strip of metal reversely bent upon itself along its longitudinal centerline to bring opposite sides into spaced parallel relation to form a screen receiving channel. The free edge of the screen 32 is projected between the opposed legs of the member 138 and is clamped between them.

A strip of yieldable material 162 is folded over the opposed faces of the free marginal edge of the screen 32 before it is inserted between the opposite legs of the member 138. This material may be fabric, rubber or any other suitable material and of a thickness such that, regardless of how forcefully the opposite legs of the bar 138 are pressed toward each other after insertion of the screen 32 and strip 162, the screen will become embedded in the strip 162 and will be maintained against substantial actual contact with the inner walls of the bar 138. This effectively prevents the various strands of the screen from shearing one another due to the clamping action of the member 138.

In order to enhance the holding effect of the bar member 138 on the screen 32, the strip 162 is preferably made from rubberized fabric having a relatively high frictional coefficient and additionally the inner surfaces of the bar member 138 are preferably lightly knurled or otherwise roughened before it is bent into channel shape in order to further increase the holding tendency of the same upon the strip 162.

Another feature of the present invention which may be found desirable to use consists of a means in connection with each of the guide members 30 for locking the window 21 against unauthorized movement. This means, which is best shown in Figs. 7, 8 and 9, consists of an eccentric or cam 170 provided with an operating arm 172 and pivotally secured to the side wall of each guide 30 as by means of a screw 173 extending through such side wall of the guide 30 and into the window frame 20. The leg of the inner angle member 28 of each guide 30 is cut away as at 174 so as to permit the eccentric or cam 170 to project through and beyond the member 128 and into contact with the member 126. When the handle 172 is in its upper position, as indicated in dotted lines in

Fig. 8, the cam or eccentric 170 is withdrawn from contact with the leg of the outer member 126 and therefore permits free vertical movement of the sash for the window 21. When, however, the handle 172 is moved downwardly into the position indicated in full lines in Fig. 8, the cam or eccentric 170 is forced outwardly against the cooperating portion of the angle member 126 of the guide 30 and distorts such portion outwardly against the sash 24 for the window 21 and causes such sash to be forced outwardly against its cooperating guide in the window frame 20, thus clamping it against unauthorized vertical movement. It will be apparent that inasmuch as the cam 170 acts through the leg of the channel member 126 of the guide 30, it acts through a surface that is always stationary regardless of the position of the window 21 and, accordingly, any attempt to raise or lower the window when clamped in position by this mechanism will have no effect whatever on either tending to tighten or to loosen this clamping mechanism.

Each cam or eccentric 70 and its handle 72 is preferably formed as part of an assembly including a washer 176, best illustrated in Fig. 9 which is provided with a boss 178 projected through a corresponding opening in the cam 170 and peened over so as to form a pivotal support for the same and to effect a permanent assembly therewith. One edge of the washer is preferably inwardly bent as at 180 and so located as to project over the inner edge of the guide 30 and is preferably of such length as to be slightly embedded in the material of the window frame 20, thus aiding in permanently locking it in position and helping it to take the thrust of the cam 70 in placing the window 21 in locked position.

Formal changes may be made in the specific embodiment of the invention described without departing from the spirit or substance of the broad invention, the scope of which is commensurate with the appended claims.

What I claim is:

1. For use in connection with a window frame having a window sash slidably mounted in said frame, a housing mounted on said window frame at one edge of the window opening therein, a roller mounted in said housing, a screen secured to said roller, spring means constantly tending to roll said screen upon said roller, a flexible bar member secured to the free edge of said screen, and guide members for the ends of said bar, in combination, a hook member secured to said sash, a handle member secured to said bar member and provided with a part for interengagement with said hook member, said handle member and said hook member being so constructed and arranged as to cause said bar member to be urged directly against said sash under the influence of the tension in said screen caused by said spring means, the whole being so constructed and arranged as to necessitate springing of said bar member between its ends out of its normal plane in order to operatively engage or disengage said handle from said hook.

2. In a roll screen structure for windows including a window frame having a sill and a window vertically slidable in said frame, bracket means secured to the opposite ends of said sill, and a roll screen housing detachably secured to said brackets, said housing and brackets being so constructed and arranged that said housing may be removed without disconnecting said brackets from said sill.

3. In a roll screen structure for windows in-

cluding a window frame having a sill and a window vertically slidable in said frame, bracket means secured to the opposite ends of said sill, abutments on said bracket means, a roll screen housing movable into engagement with said abutment means, and clamping means associated with each of said bracket means engageable with said housing for locking it in position against said abutment means.

4. In a roll screen structure for windows including a window frame having an opening therein and a window slidable in said opening, a bracket secured to said frame at opposite sides of said window, a hook formed on each of said brackets for reception of an edge of said housing, and means associated with each of said brackets and releasably engageable with said housing for releasably locking said housing to said brackets.

5. In a roll screen structure for windows and the like, in combination, a housing adapted for securement to the sill of a window frame, a guide member adapted to be secured to the window frame on either side of the opening therein and in cooperative relation with respect to said housing, each of said guide members comprising a member providing a channel therein for receiving the edge of a roll screen, the inner wall of said channel being formed into a coil and arranged in abutting relation with respect to said housing.

6. A guide for the edge of a roll screen comprising a member including a pair of angle portions, the bases of which are secured together and the legs of which are arranged in spaced relation to form a screen receiving channel between them, one of said angle portions being formed of thin, flexible, resilient metal having a normal inclination outwardly away from a plane perpendicular to the base thereof whereby, in securing said base to a window frame, the outer leg of said portion may be caused to resiliently press against a sash slidable in said frame.

7. For use in connection with a window frame having an opening therein, a window sash slidable in said frame, in combination, a screen guide member adapted to be secured to a side of said window opening, said guide member comprising a pair of angle members the bases of which are arranged in contact with each other and are adapted to be secured in contact with said frame and the legs of which are arranged in generally spaced relation to form a channel therebetween, the inner of said legs having a cut-away portion, a cam member pivotally mounted upon said bases and projecting through said cut-away portion and being engageable with the outer of said leg members, the outer of said leg members being flexible and adapted to be arranged in substantial contact with said window sash and said cam member being operable to distort said outer leg member outwardly to clamp said sash to said frame.

8. In combination, a window frame having a sill, a window vertically slidable in said frame, a pair of brackets secured to said sill at opposite ends thereof, a guide projecting upwardly from said sill at each side of said frame and fixed to the corresponding side of said frame independently of the corresponding of said brackets, a housing engageable with said brackets, means cooperable between said brackets and said housing for releasably securing said housing to said sill so constructed and arranged that said housing may be removed from said brackets without removing said brackets from said frame, a roller

in said housing, a screen wound on said roller, and means for interconnecting the free edge of said screen with said window.

9. For use in a roll screen structure for windows including a window frame having an opening therein and a window sash slidable in said opening; a bracket secured to said frame at each of the opposite sides of said opening, means fixed to each of said brackets forming a stop surface, a roll screen housing receivable between said brackets and movable to a position in engagement with said stop surfaces, and an arm pivoted to each of said brackets and having a surface engageable with said housing to releasably lock said housing in engagement with said stop surfaces.

10. For use in connection with a window frame having a window opening therein, a sash in said opening vertically slidable relative to said frame, a roll screen extending over said window; means for guiding an edge of said screen during movement comprising a guide adapted to be secured to said frame at the side of said window opening, said guide comprising a member having a channel opening therein for reception of an edge of said screen, the outer wall of said channel being resilient and adapted to resiliently press against the sash of said window.

11. In a roll screen structure for windows including a window frame having side members and a sill, and a window sash vertically slidable in said frame, in combination, bracket means secured to said frame at the opposite ends of said sill, a roll screen housing detachably secured to said brackets, a guide member secured to each of said opposite side members and extending vertically upwardly from said housing, each of said guide members being of angular section, one leg of which is of channel section whereby to adapt it to receive the margin of a screen therein, a coil at the lower end of each of said guide members integral with a wall of said channel and lying in abutting relation with respect to said housing, the outer marginal wall of the channel of each said guide member resiliently pressing against said window sash to provide a seal between said frame and window.

12. In a roll screen structure for windows and the like, in combination, a housing adapted for securement to the sill of a window frame, a guide member adapted to be secured to the window

frame on each side of the opening therein and in cooperative relation with respect to said housing, each of said guide members comprising a member providing a channel therein for receiving the edge of a roll screen, and a portion secured to the inner wall of said channel yieldable in the direction of length of said guide member and adapted to yieldably engage said housing.

13. In a roll screen structure for windows including a window frame having a sill and a window sash vertically slidable in said frame, a roll screen, a housing of fixed dimensions therefor, the free edge of said screen being securable to the lower edge of said sash, and means for mounting said housing in operative position with respect to said sash and centrally of the window opening in said frame regardless of variations in the width of said window opening in excess of the length of said housing comprising a bracket for each end of said housing, each of said brackets being secured to said sill independently of the side members of said frame whereby to permit a choice of location thereof longitudinally of said sill to center said housing thereon, and means releasably co-acting between said brackets and housing for releasably securing said housing relative to said sill.

14. In a roll screen structure for windows including a window frame having a sill and a window sash vertically slidable in said frame, a roll screen, a housing of fixed dimensions therefor, the free edge of said screen being securable to the lower edge of said sash, and means for mounting said housing in operative position with respect to said sash and centrally of the window opening in said frame regardless of variations in the width of said window opening in excess of the length of said housing comprising a bracket for each end of said housing, each of said brackets being secured to said sill independently of the side members of said frame whereby to permit a choice of location thereof longitudinally of said sill to center said housing thereon, means releasably co-acting between said brackets and housing for releasably securing said housing relative to said sill, and guide means for each edge of said screen, each of said guide means being secured to its corresponding frame side member independently of said sill.

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