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W. F. LAHEY ET AL

1,908,989

SCREEN AND SHADE MOUNTING

Filed May 31, 1930

2 Sheets-Sheet 1

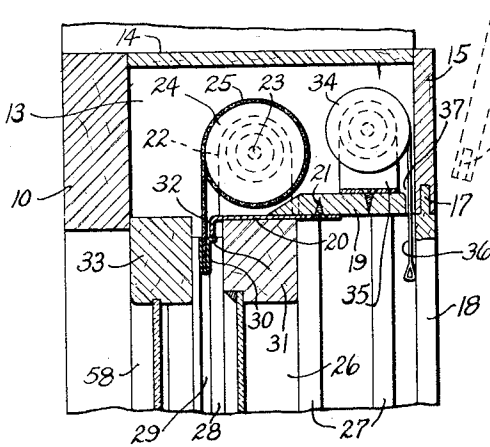


Fig. 1.

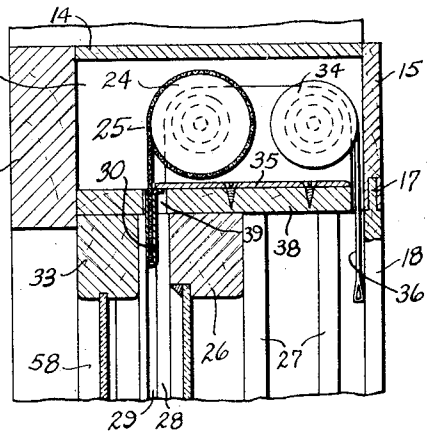


Fig. 2.

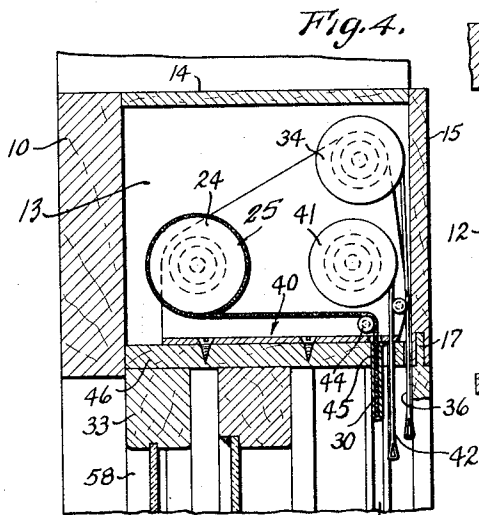


Fig. 4.

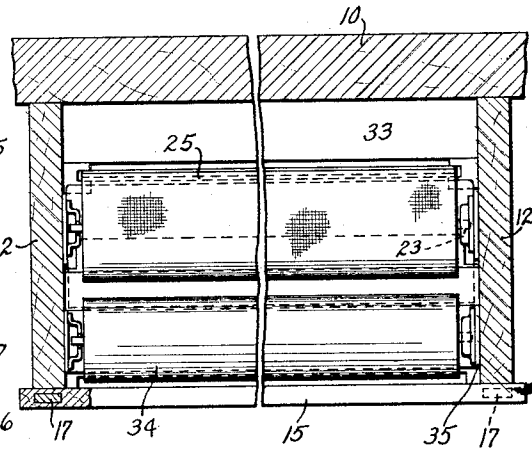


Fig. 3.

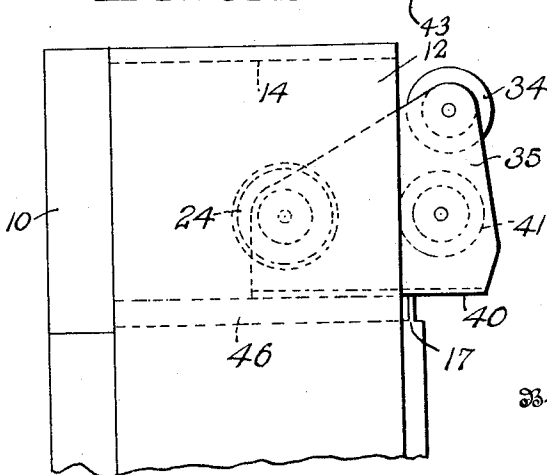


Fig. 8.

Inventors

William F. Lahey and

Maurice S. Lahey

Worster & Davis

Attorneys

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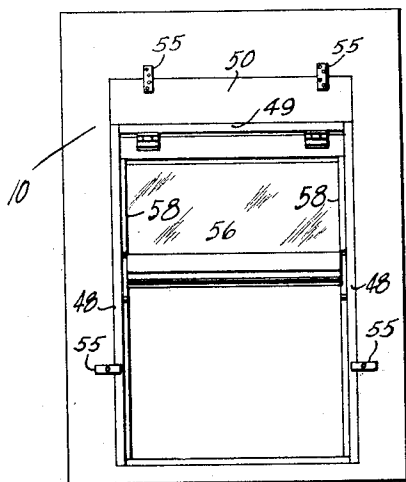


Fig. 6.

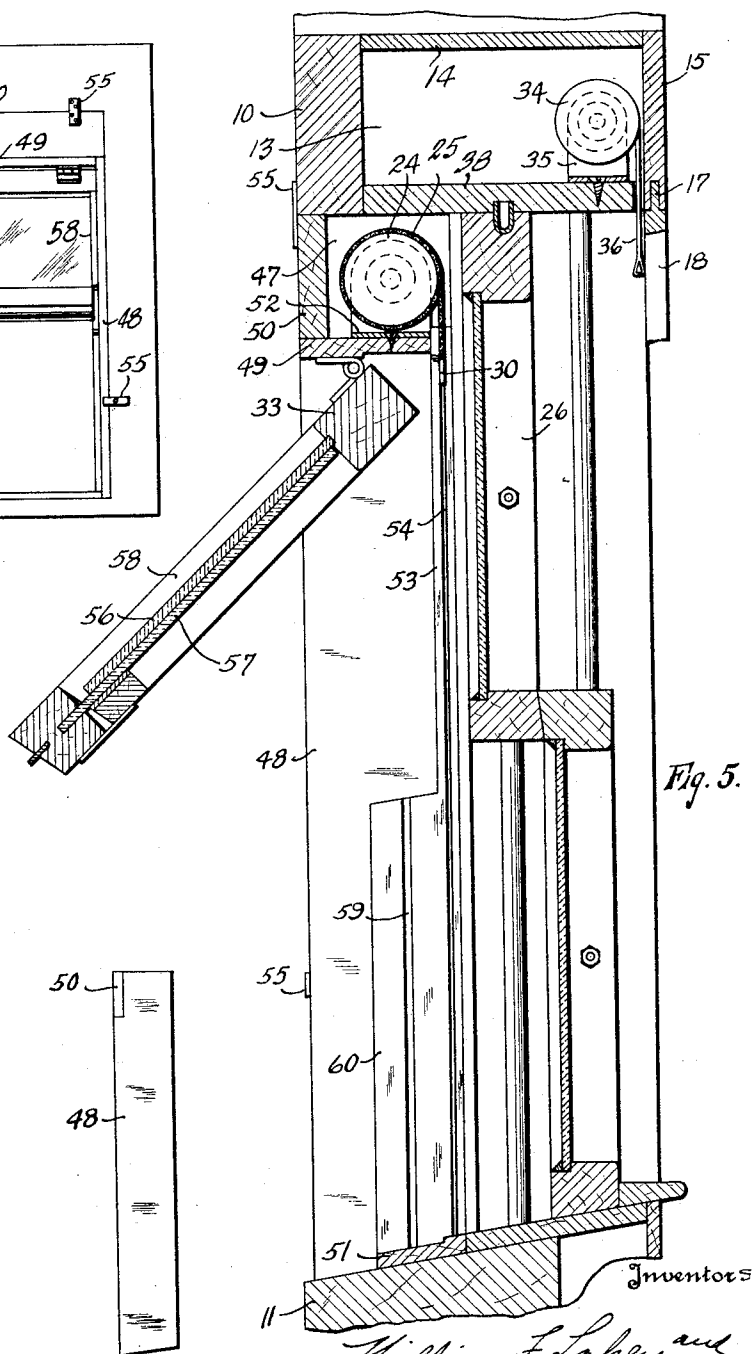


Fig. 5.

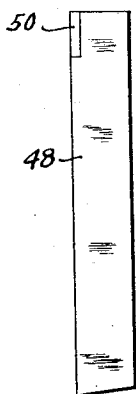


Fig. 7.

Inventors  
William F. Lahey and  
Maurice S. Lahey  
By  
Moster & Davis Attorneys

## UNITED STATES PATENT OFFICE

WILLIAM F. LAHEY AND MAURICE S. LAHEY, OF NEW CANAAN, CONNECTICUT

## SCREEN AND SHADE MOUNTING

Application filed May 31, 1930. Serial No. 458,190.

This invention relates to an improved window construction including an improved means for mounting shades and screens, and has for an object to provide a construction which involves the standard window frame and has means for mounting screens and shades in such a way that they are out of sight and protected from dust and moisture when not in use, but in which they are easily accessible for inspection, cleaning or renewal.

Other objects of the invention will become apparent as the description thereof proceeds and it will be evident that other modifications and details of construction may be employed without departing from the principles of our invention. Referring to the accompanying drawings

Fig. 1 is a transverse section through the upper portion of the window construction showing one form of our invention.

Fig. 2 is a similar section showing a somewhat different arrangement.

Fig. 3 is a top plan view of the device of Fig. 2.

Fig. 4 is a similar section to Fig. 2 showing still another arrangement.

Fig. 5 is a vertical section of a window construction showing still another arrangement.

Fig. 6 is an arrangement looking from the left of Fig. 5 on a smaller scale.

Fig. 7 is an edge elevation of the removable frame of Figs. 5 and 6, and

Fig. 8 is an upright fragmentary view looking from the left of Fig. 3 showing how the rollers and their support may be mounted in and removed from the frame as a unit.

The window illustrated in the drawings comprises a standard window frame including the outer finishing members 10, the usual sill construction 11 and side members 12, which frame may be mounted in a wall in the usual manner. As is the usual construction, these frames have a compartment 13 in the top thereof which is ordinarily open to the space in the building walls, and we use the space of this compartment as a location for screens and shades, either or both. Thus, the shades and screens are concealed when

not in use and, furthermore, are protected from injury from dust and moisture, and we prefer to enclose the chamber or compartment 13 by means of a wall 14 across the top thereof so that the shades and screens are entirely enclosed.

The shades and screens may be mounted in any suitable manner, but we prefer to mount a support in the compartment which is removable through a wall thereof and which will carry a spring roller or rollers for the shade or screen. Thus, if desired, the shade or screen on its spring roller may be assembled and mounted as a unit in the compartment and still the shade and screen with their rollers are at all times easily accessible for inspection, renewal or repairs. Easy access is gained to the compartment by making the upper transverse strip 1 of the interior finishing trim removable, thus, exposing the entire inner side of the compartment 13 and permitting easy access thereto and other elements within the compartment. This strip 15 may be mounted in any suitable manner, a convenient means being to provide it with sockets 16 in its lower edge to receive upstanding tongues 17 on the side members 18 on the interior trim, but of course, other means of removably mounting this strip 15 may be employed as desired.

We have shown in the drawings several ways of mounting the screen and shade. In the arrangement shown in Fig. 1, the lower member 19 forms the bottom wall of the compartment and extends across the top of the window opening. It is cut away at the rear portion thereof, through which the roller carrying a screen or shade may be inserted in the compartment 13. Thus, a bracket construction having a base 20 extends over the top of the window opening and is secured to the underside of the member 19 by any suitable means such as screws 21, and it covers a greater portion of the opening through the member 19. At its opposite ends it has upwardly extending supporting members 22 in which are mounted the trunnions 23 of any suitable type of spring roller 24. In the form shown in Fig. 1, this roller carries the woven flexible wire screen 25, but it could be a shade

or similar element, if desired. In the arrangement, the screen may be drawn to the rear of the upper sash of the window indicated at 26, the lower sash which is ordinarily inwardly on the upper sash not being shown. These sashes are guided for vertical sliding movement by the usual runways 27 and 28, in the present construction the rear runway 28 being provided with upright guide grooves 29 for the edges of the screen 25. It is preferred to secure a stiffening bar 30 along the lower edge of the screen, and the opposite ends of this bar may be also guided in the grooves 29. This bar may have an upper flange 31 to engage the downwardly extending flange 32 on the bracket 20 to limit upward movement of the screen. A storm sash 33 may also be mounted in the frame outside the screen. This storm sash may be of any desired construction but is preferably similar to that of our co-pending application, Serial No. 458,189, filed of even date herewith, patented on Aug. 30, 1922, No. 1,874,764. Thus, it will be seen that the screen can be drawn down between the ordinary sash and the storm sash and may be used to screen only the upper half of the window or the whole of it as desired. If it is desired to remove the screen, it is only necessary to slide down the sash 26, open the storm sash and then remove the screws 21, after which the bracket 20 and the screen 25 with its roller may be removed through the opening in the member 19. Or, if preferred, the finishing strip 15 may be removed and the screen and roller removed through the opening covered by this strip.

We also mount in the compartment 13, the rollers for one or more shades. Thus, a roller 34 is mounted on a suitable support 35 secured to the top of the wall 19 or any other wall of the compartment and this spring roller carries a flexible shade 36. There is a suitable slot or space 37 at the rear edge of the member 19 through which the shade passes and may be drawn down to any length desired. It will thus be seen that the rollers for both the shade and screen are mounted in the compartment 13 in the upper part of the window frame and, therefore, can be assembled complete in the frame as a part of the frame assembly, or they can be mounted in the compartment through the inner wall thereof covered by the removable strip 15. Thus, the spring elements and their mounting elements are at all times concealed so that they are not visible in the window opening and, thus do not mar the appearance of the window, and they do not take up any space in the window opening. When not in use the screens and shades are enclosed in the compartment where they are protected from dirt and moisture, but they are easily accessible at all times to be drawn down over the window opening.

In Figs. 2 and 3 we have shown a slightly different arrangement. In this arrangement

both the screen roller 24 and shade roller 34 are mounted on the same support or bracket 35 which is mounted in the compartment 13 on top of the bottom wall 38. It will, of course, be understood however, that the screen and shade roller may, if desired, be mounted on separate brackets. The screen passes down through a slot 39 in the wall 38 between the upper sash 26 and the storm sash 33 the same as in Fig. 1 while the shade 36 passes down inwardly of the sash as in Fig. 1.

Fig. 4 shows a somewhat similar arrangement to Fig. 2 except that the screen 25, instead of passing between the upper sash 26 and storm sash 33 passes down on the inside of the window inwardly of both the upper and lower sashes. It is often demanded by a builder or owner of a house that two shades be employed instead of one. Fig. 4 shows these duplicate shades and shows how the rollers for the duplicate shades as well as the screen may all be mounted within the compartment 13. Thus, the supporting bracket 40 serves as the mounting for the spring roller 24 for the screen as well as the spring rollers 34 and 41 for the shades 36 and 42, respectively. One of the runways 27 for the sash is provided with vertical grooves 43 for the edge of the screen 25 and the stiffening bar 30, this screen running over a guide roller 44 and passing down through a slot 45 in the lower member 46 of the window frame forming the bottom of the compartment 13. The shades 36 and 42 also pass downwardly through openings in this member just inwardly of the screen. This whole construction including the support bracket 40 and spring rollers for the shades and screen may be assembled as a unit and mounted in the compartment 13 as indicated in Fig. 8 and they are all accessible through a wall thereof by removal of the inner finishing strip 15. If desired, of course, the shade rollers and the screen rollers may be mounted on separated brackets instead of the one single bracket as shown.

In Figs. 5, 6 and 7 is shown a still different arrangement. One or more shades and their spring rollers 34 and 41 may be mounted in the compartment 13 the same as in Figs. 1, 2 and 4, but in this arrangement instead of mounting the screen in this compartment, it is mounted in a compartment 47 in the top of a removable frame carrying the storm sash 33. This frame includes side members 48 and top members 49 and 50 and bottom sill member 51. The spring roller 24 carrying the screen 25 is mounted in a support or bracket 52 secured in the compartment 47 on the member 49. A runway 53 is provided on the inner wall of each of the side members 48 and has guide grooves 54 for guiding the edges of the screen and stiffening bar 30. It will be evident that the entire storm

5 window construction including the frame construction 48, 49, 50, 51, the storm sash construction 33 and the screen and roller 24, 25 can all be assembled as a unit and mounted and removed as such from the window opening of a standard frame 12, 16. It may be secured in the frame by any suitable means such as the detachable securing means 55. As indicated above, the storm sash 33 is preferably the same as that of our co-pending application, and comprises a sash having an upper glass 56 and a lower glass 57, the lower glass being slidable in grooves in the inner surfaces of the side members 58 of the sash frame. When in closed position, the lower glass 57 can be slid downwardly in the grooves 59 in the member 60 secured to the inner side of the side member 48 of the frame.

10 It will be evident that in this construction and arrangement, the screen and shades are mounted in compartments at the top of the frame the same as in form in Figs. 1 to 4. In all cases, the screens and shades are enclosed in a space where they are out of the way out of the window opening proper. They are, therefore, out of sight and thus, do not mar the appearance of the window and they do not require space in the window opening. Furthermore, the shades and screens are protected against dirt and moisture and when not in use are entirely out of sight. They are, however, together with their rollers, easily accessible at all times for inspection, repair or renewal, and still further, they may be assembled and mounted in their supports entirely outside and separate from the window construction and then mounted as a unit in the window frame. This is much more convenient, gives a much better appearance and is much less liable to injure the frames than in the present construction commonly employed where they are mounted in the window opening or on the inside of the interior trim.

45 If desired, the members 56 and 57 may be of metal or similar opaque material instead of glass. If of metal for instance, this construction would be very effective for preventing easy access to the premises when the window is locked from the inside. This will be evident from the fact that when the window is closed the member 57 is in the grooves 59 and effectively locks the frame closed. Thus, the window can be effectively sealed up when the house is closed for the summer. Metal plates would also be effective for use for way-side stands. Here they would not only provide a canopy when swung out as shown in Fig. 5, but when closed would effectively close the premises for the night or for the winter. Also, instead of the screen being wound on a roller 24, it could be mounted permanently in the frame 48 as for example by mounting it in the grooves 54.

65 It is to be understood that where the term

"glass" is used in the claims for the members 56 and 57, it is used in the generic sense for a plate to close the openings and may include plates of glass, metal, wood or other suitable material.

Having thus set forth the nature of our invention, what we claim is:

1. In a window construction including a frame having a compartment at its upper end, a member partially closing the lower side of said compartment, a bracket for supporting a curtain carrying roller including a base removably secured to the underside of said member and projecting beyond an edge thereof to further partially close the lower side of the compartment.

2. In a window construction including a frame having a compartment at its upper end, a member partially closing the lower side of said compartment and providing an opening at the lower side of the compartment for the passage of a flexible member, a member for closing a vertical side of said compartment, said member having vertically extending recesses in its lower edge, said frame having projections entering said recesses to removably mount the member in a position closing the vertical side of the compartment, a support for a roller mounted in the compartment and including a base carrying bracket arms, means securing the base to the member closing the lower side of the compartment, said base and parts carried thereby removable as a whole through the openable vertical side of the compartment.

3. In a window construction, a frame having sash guides on its upright side walls and provided with a compartment at its upper end above said guides, the inner wall of said compartment being removably mounted to permit access to the compartment, means in said compartment for mounting a roller, carrying a flexible element such as a screen, said means insertable and removable through the opening covered by said inner wall.

In testimony whereof we affix our signatures.

WILLIAM F. LAHEY.  
MAURICE S. LAHEY.