SHADE ROLLER BRACKET

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

H. H. TURNER

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HOWARD H. TURNER

INVENTOR.

C. F. Stratton
This invention relates to a door construction in which an opening in the door is selectively spanned by a window or a screen, or by adjacent portions of such window and screen. More particularly, the invention deals with a novel and improved mounting housing for a roller on which said screen is wound.

The roller is of the spring-tensioned shade roll type and may require adjustment or servicing for the best operation of the screen-window unit. Accordingly, an object of the present invention is to provide unitary means of the character referred to that may readily be placed in operative position in a door frame and as readily removed therefrom to facilitate adjustment and servicing.

Another object of the invention is to provide novel roller-mounting and housing means, the same being so constructed that roller tension may be adjusted before mounting of the unitary means on a door.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes one embodiment of the present invention, which is given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a broken inner face view of a door structure embodying the features of the present invention.

Fig. 2 is an enlarged side view, partly in section, of the upper left edge of the door.

Fig. 3 is a similarly enlarged vertical sectional view as taken on line 3-3 of Fig. 1.

Fig. 4 is a further enlarged cross-sectional view as taken on line 4-4 of Fig. 1.

Fig. 5, to the scale of Fig. 2, is a cross-sectional view of an element of the construction as seen from the opposite side of Fig. 2.

Fig. 6 is an elevational view of a lock element used in the construction.

The door structure that is illustrated comprises generally, a frame 10 having an opening 11 in the upper part thereof, and a combined window and screen unit 12 closing said opening 11.

The door frame 10 comprises stiles 13 connected at the top by a rail 14 and at the bottom by a rail 15. Intermediate the rails 13 and 14, the frame is provided with a pair of center rails 16 and, between the latter and the bottom rail 15, with panels 17. The rails 16 and panels 17 are spaced, front to back, to define a well that is receptive of the window portion of unit 11. The top rail 14 is transversely routed to provide the same with an inwardly facing recess 18 that extends from the bottom edge of said rail and an intermediate line between said bottom edge and the top edge.

The inwardly directed faces of stiles 13 are provided with grooves 19 that are defined between guide strips 20 removably fastened to the stiles, as by screws 21. The grooves thus formed extend upwardly into communication with the ends of recess 18.

The combined unit 11 comprises, generally, a window 22, a screen 23 attached in end-to-end relation to said window, a shade roller 24 on which said screen is wound, a housing 25 for said roller, window guide means 26 fixed to said housing 25 and residing in grooves 19, and means 27, at one end of housing 25, to retain the adjustment of tension of roller 24.

The window 22 comprises a pane 28 enclosed in a channel frame 29. The upper end of said window, by means of intermediate connecting means 30, is attached to the lower edge of screen 23. The window thus provided is guided for vertical movement in guide means 26 and is adapted to close door opening 11 when raised to its uppermost position.

Screen 23 is adapted to roll upon shade roller 24 in a conventional manner. Said roller is also generally conventional and embodies a torsion spring 31, one end of which is connected to a tongue 32 extending from one end of said roller. Although not shown, the shade roller, in the usual manner, is provided with one-way ratchet means including a ratchet wheel and one or more dogs for latching tongue 32 and thereby holding the adjusted tension of spring 31.

Housing 25 comprises end walls 33 and 33a integrally formed on the ends of a semi-cylindrical hood 34. The stiles 13, adjacent the ends of recess 18 in the top rail 14, are formed with semi-circular recesses 35 into which the end walls 33 and 33a project. The upper and lower lateral edges of hood 34 are provided with the respective upper and lower flanges 36 and 37. Flange 36 is arranged to have flat engagement with the inner face of rail 14 above the recess 18 therein and with adjacent portions of stiles 13. Screws 38, passing through flange 36 and into the door, secure said hood to the door. Flange 37 is arranged to extend across the lower portion of recess 18 and, therefore, defines an inner closure for said recess. Said flange 37 is preferably stiffened by a short flange 39 bent toward the outer side of the door.

The window guide means 26 comprise a pair of channels 40 that reside in grooves 19 and are affixed to hood flange 37 by brackets 41 as shown in Fig. 3.

One end of roller 24 is rotationally carried by a tubular journal 42 affixed to end wall 33a (Fig. 1). The means 27, at the opposite end is carried by end wall 33 and comprises a similar tubular journal 43 into which the end of the shade roller that has tongue 32 resides, as in Fig. 4. Both journals 42 and 43 are formed as cup-like members that have end walls 44 and cylindrically tubular walls 45. The wall 44 of journal 43 is provided with a central circular aperture 46 through which tongue 32 extends.

Whereas, journal 42 is directly and permanently affixed to end wall 33a of the housing, journal 43 is welded to a washer 47 that is removably connected to end wall 33b by screws 48. This washer 47, as best seen in Fig. 5, is provided with an open end guide slot 49, the closed end of said slot being in register with aperture 46 in wall 44 of journal 43. A registering aperture 50 is provided in wall 33, as shown in Fig. 2, and said latter aperture is laterally open to form a narrowing slot as at 51.

By slipping one end of roller 24 into journal 42, then slipping journal 43 and the washer 47 welded thereto over the opposite end of said roller, then moving said latter journal into place inward of wall 33, and setting
the screws 48, the roller is mounted within the housing 25. Now, tongue 32 may be turned to tension spring 31, as desired. Thereafter, lock piece or washer 53 may be slid into guide slot 49 between journal wall 44 and end wall 33, so that the bifurcation or slot 53 of said lock piece may engage said tongue and hold the same against further rotation. Now, with the window 22 in guides 26, the roller-mounted housing can be mounted on the door by means of screws 38. When strips 20 have been fastened in place to locate guides 26, the means 12 is in operative position.

While the foregoing has illustrated and described what is now contemplated to be the best mode of carrying out the invention, the construction is, of course, subject to modification without departing from the spirit and scope of the invention. It is, therefore, not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all modifications that may fall within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A mounting bracket for the end of a shade roller that has a projecting tongue for varying the tension of the spring of said roller and which is further provided with an enclosing hood, said bracket comprising a journal cup having an end and adapted to rotationally receive said end of the roller, a washer affixed to the outer-end surface of said cup and having a marginal portion extending beyond the periphery of the cup, means to separably connect said marginal portion and the enclosing hood, registering apertures in said cup end, hood and washer adapted to rotationally receive the projecting tongue of the shade roller when the end of the roller is disposed in the cup, the hood and washer apertures extending laterally to form lateral guide slots, said slots being in register, and a removable lock piece slidingly fitted into said washer slot and non-rotationally engaged with a tongue extending through the registered slots.

2. A mounting bracket according to claim 1 in which the lock piece is provided with a bifurcation in which the tongue is received and with opposite parallel edges engaged in the slot in said washer.

3. A mounting bracket according to claim 1 with the hood slot narrowing to less width than the washer slot.

References Cited in the file of this patent

UNITED STATES PATENTS

1,388,346 Kirsch Dec. 5, 1921
1,476,160 Kirsch Aug. 23, 1921
1,919,311 Triller July 25, 1933
2,096,105 Nye Nov. 2, 1937
2,428,644 Zega Oct. 7, 1947
2,487,648 Green Nov. 8, 1949
2,543,118 Maffei et al. Feb. 27, 1951
2,627,632 Kelly Feb. 10, 1953
2,663,532 Wells Dec. 22, 1953

FOREIGN PATENTS

170,445 Great Britain Oct. 27, 1921