

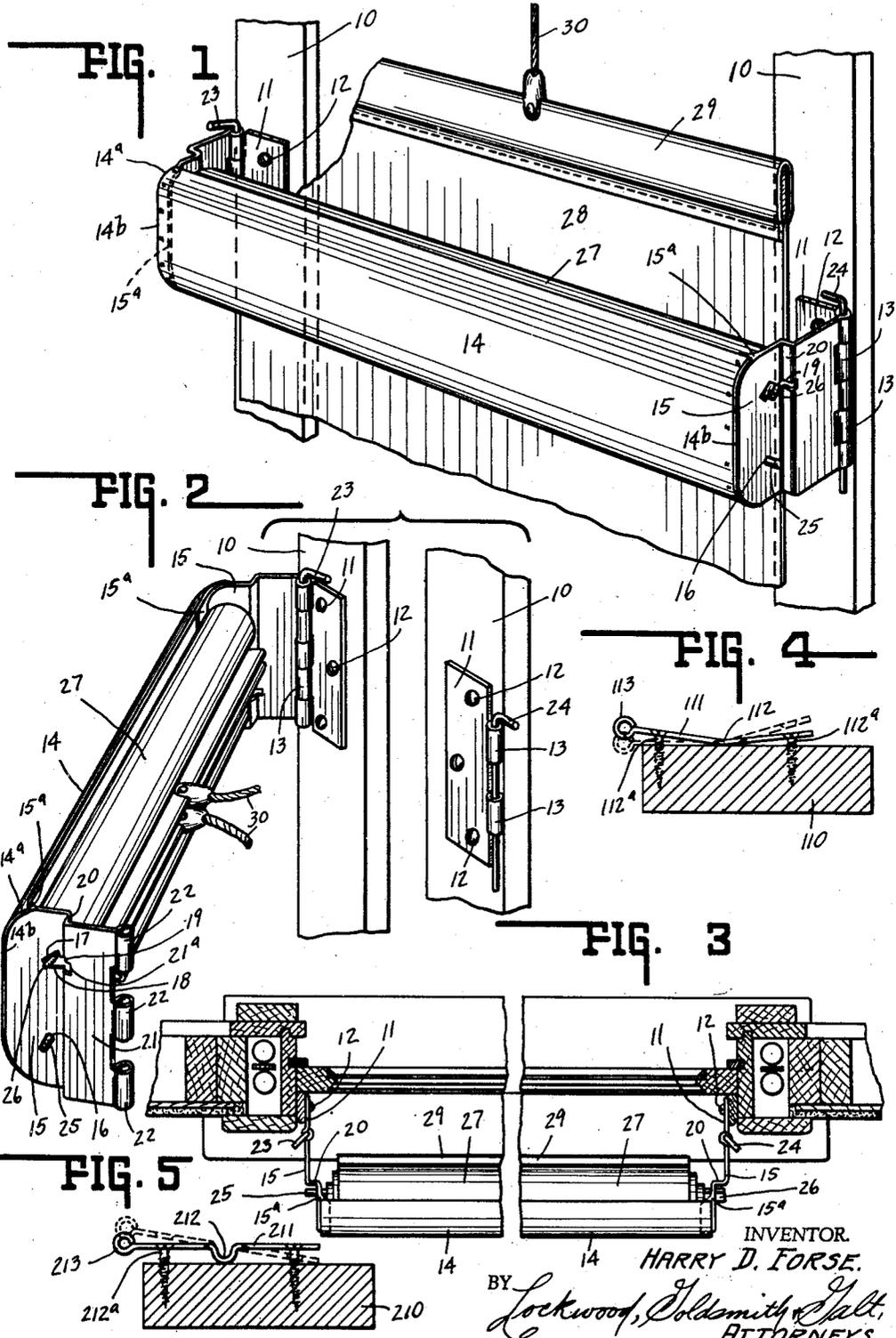
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DOUBLE ROLLER SHADE SUPPORT AND LIGHT SHIELD

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DOUBLE ROLLER SHADE SUPPORT AND LIGHT SHIELD

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15 Claims. (Cl. 160-41)

This invention relates to a window shade fixture arrangement.

Heretofore in the art it has been the custom to mount two roller shades midway between the top and bottom of a window arrangement and have the upper shade extensible upwardly and the lower shade extensible downwardly and associate with such shade and shade supports, a light shield usually positioned between the window frame and the shades, thereby exposing the shades to the interior of the room.

For window washing purposes, it was readily possible to remove the shades and then if necessary, remove the light shield. Whenever, however, the light shield was positioned so that it covered the shades from the interior of the room, as shown in the Chambers Patent No. 1,201,697, dated October 17, 1916, then it was difficult to remove the light shield and more particularly the shades. In most instances the light shield was of metal or wood character which would not be readily affected by water but the shades being of fabric or like material, were subject to spotting, deterioration, et cetera, by reason of water accidentally falling thereon or being applied thereto in the window washing process.

The present invention, therefore, is directed to a shade fixture wherein it is not required to remove the shield and the shades from the window for window washing purposes.

Also, the present invention is directed to a simplified construction which, excluding the roller shades, consists of but five pieces, to-wit, a light shield member having two similarly directed portions, the extreme or free ends of which are hinge formed, a pair of hinge leaves and pintles for connecting the leaves to the hinge formations.

If desired, but not necessarily, one of the hinge pins may be permanently associated with the cooperating hinge formation and hinge leaf but at least one hinge pin or pintle is of detachable character for the following purposes:

The detachable pin or pintle when detached permits the light shield, which constitutes the roller shade support as well, to be swung on the other pintle axis and away from the window together with the shield supported roller shades thereby permitting window washing without requiring any more than the removal of the detachable pintle, the swinging of the structure, and then the return swinging of the structure and reassociation of the detachable pintle following window washing. When both pintles are detach-

able, the entire structure may be detached from the hinge leaves when the pins are removed.

The aforesaid structure, it will be apparent, is of maximum simplicity and by reason of such maximum simplicity and the omission of supplementary interlocking arrangements, et cetera, the combination light shield and shade supporting portions together with the hinge formations at the ends thereof, may be of extremely rigid character and may be fabricated at a comparatively low cost.

One object of this invention is to provide a construction capable of operating, as aforesaid, which may be fabricated with a minimum of dies and in the present invention but three stamping dies are required, to-wit, as follows: the stamping die for forming the hinge leaf, both leaves being integral; the stamping die for forming the roller shade supporting portion terminating in the hinge formation, both of said portions being integral, and the die for forming the light shield panel portion.

It is contemplated forming this panel portion of strip sheet metal of the proper width and gauge and in long lengths. These then are cut to size and the combination shade support portion with the hinge formation at one end is then suitably secured to the proper length of light shield panel and permanently secured as by spot-welding and the like, thereby forming a unitary arrangement that is extremely rigid and light, and naturally extremely simple.

Other objects and features of the invention will be pointed out more fully hereinafter.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims.

In the drawing,

Fig. 1 is a perspective view of the light shield and shade support mounted upon a window casing and with the shades partially extended, the main portion of the shade shielded by the light shield being shown dotted.

Fig. 2 is a perspective view of the combination shade, light shield, et cetera, swung to an operative position to permit window cleaning.

Fig. 3 is a top plan view of the invention applied in a second position to a window structure, the latter being shown in cross-section.

Fig. 4 is an edge view of a modified form of hinge leaf.

Fig. 5 is a similar view of a still further modified form of hinge leaf.

In the drawing the numeral 10 indicates a conventional window casing of a guillotine type

window, for example, although the invention is not restricted thereto. 11 indicates two identical hinge leaves suitably secured as at 12 to the face of the casing and upon opposite sides of the window and the same are oppositely directed, to-wit, the hinge pin forming portions 13 are directed oppositely of each other. Herein each hinge leaf is shown provided with a pair of such eye-forming portions and these are spaced from the ends and from each other, as shown. 14 indicates a light shield of sheet metal having the curved longitudinal edge portions 14a and the ends 14b. This light shield panel portion is of the desired length. To the same is secured by spot-welding, or the like, an end or bracket 15 having the shield conforming flange 15a by which the shield and portion 15 may be spot-welded together in rigid relation.

The portion 15 adjacent one end is provided with a circular opening 16 and adjacent its opposite end is provided with an angularly directed elongated slot 17. The latter has a lateral extension 18 which is extended as at 19 in the angularly directed portion 20 of the portion 15. The portion 21 is an extension of the angular portion 20 and is substantially parallel to the portion 15 but offset therefrom to the extent noted, the purpose of said offsetting being set forth hereinafter. The slot 19 in this offset portion 20, if desired, may be continued slightly as at 21a into the face of the portion 21.

The free edge of the portion 21 is provided with a plurality of spaced eye-forming portions 22 and these are suitably spaced apart so as to accommodate the eye portions 13 of the hinge leaf 11. If desired, one hinge pin, such as 23, may be permanently mounted in the confronting interfitting eye portions 22 and 13 of the adjacent hinge leaf and shade bracket hinge formation. The other confronting similar members when associated together are adapted to detachably receive a detachable hinge pin or pintle 24 and the same when removed permits the light shield and roller shade supporting brackets to be swung away from the window upon the axis including the permanent hinge pin 23. Of course, if desired, both hinge pins may be of removable character but in that event, the head portion thereof must always be positioned uppermost so as to prevent dropping of the pin, all as shown in Figs. 1 to 3.

When both hinge pins or pintles are of detachable character, removal thereof permits the entire removal and simultaneous removal of the combination light shield, roller shade supporting brackets and the roller shades supported thereby. When, however, but one of the hinge pins or pintle is permanently mounted, the detachable hinge pin or pintle upon removal only permits the aforesaid entire structure to be swung away from the window, as previously described. When both pins are detachable, the combination may be swung to either side of the window.

Reference now will be had more particularly to the shade structures which are conventional in the art. Herein each shade roller body includes a cylindrical extension 25 at one end of the shade roller and a relatively flattened or elongated, rectangular portion 26 axially aligned therewith at the opposite end. The shade roller 27 has suitably secured to it, as by tacking or the like, the shade body portion or a fabric 28, and the latter may terminate in a reinforcing strip 29, to which is centrally secured a pull cord 30. This pull cord for an upwardly exten-

sible shade is associated with an overhead locking pulley fixture, well understood in the art. In a downwardly extensible shade the pull cord 30 is relatively free.

From the foregoing it will be understood that from the body of the roller shade at each end there projects a coaxial member, either the cylindrical portion 25 or the rectangular portion 26. Since the shades are oppositely extensible and since all roller shades are made substantially identical, it is obvious that the upper shade has a cylindrical extension at one end and at the opposite end has a rectangular extension, while the lower shade at the first mentioned end has a rectangular extension and at the last mentioned end has a cylindrical extension. The cylindrical portion rotates in the bearing opening 16. The rectangular portion does not rotate but is held against rotation in the rectangular slot portion 17.

In order to mount each shade, the cylindrical portion 25 is inserted in the cylindrical opening 16 and then the rectangular portion is passed through the slot 19 in the offset flange portion 20 and the extension 21a thereof, if provided, until the rectangular end 26 is exposed beyond the end of the bracket. It then is moved from the offset portion 20 toward the light shield portion 14 through the slot 18 until it is properly seated in the slot 17. This mounts the shade and it then is in position for operation as an extensible roller shade.

The distance between the portions 15 is but slightly greater than the distance of the shade body portion and the distance between the portions 15 is less than the distance between the extreme ends of the central projections of the roller shade previously referred to. Thus, the roller shade cannot escape from its sockets, die formed in the plate portion 15, but may be manually removed therefrom and whenever desired, providing the light shield supporting the same is removed from the window casing or is detached from and swung upon the casing, as aforesaid.

This structure when mounted upon a window casing exposes the four ends of the two roller shades and the two slots 19 when looking directly at the structure from the room interior.

Since the structure is relatively simple and since the same is entirely of metal, it may be provided with any desired conforming or contrasting coloration and the same may be applied in the form of enamel, air dried or baked thereon, or in the form of lacquer and the aforesaid materials may be applied by dipping, spraying or the like.

In commercial practice, it will be apparent that inasmuch as the majority of roller shades are standard except as to the length of the extensible fabric portion and the length of the roller body, that the brackets 15 aforesaid may be standardized and limited to one size or at most two sizes and the size of the hinge leaves conform thereto.

Various other objects and features including commercial advantages, will be obvious from the foregoing description, and by way of example—see Fig. 3—the hinge leaves may be applied to the inside of the window casing whenever desired or required.

Reference will be had now to Figs. 4 and 5, wherein the fulcrum including hinge leaf forms are illustrated. In Fig. 4, the numeral 111 indicates the plate portion having the fulcrum portion 112 formed therein and provided with the

eyes 113. Screws 112a adjustably secure the hinge leaf to the casing 110. In Fig. 4 two positions are illustrated.

In like manner, the hinge leaf 211 is adjustably secured to the casing 210 by screws 212a, the U-shaped or channel fulcrum 212 with said screws determining the position of eyes 213 relative to the casing.

With either form of the invention an accommodation adjustment range of almost one-half inch at each side of the window can be obtained. Hence, standard lengths of light shielded structures will suffice, accurate adjustment being made in the adjustable mounting of the hinge leaves.

While the invention has been illustrated and described in great detail in the drawing and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A combination light shield and dual roller shade support structure including a shade roll concealing and light shield portion, similarly directed portions unitary therewith at opposite ends of the shield portion and arranged for operative support of adjacent ends of a pair of oppositely extensible roller shades, each portion similarly directed terminating in a structure support, and a pair of leaves mounted upon a window casing, and means, at least one of which is pivotal, directly connecting each leaf and adjacent structure support, one of said connecting means being removable for shade and structure swinging upon the longitudinal axis of the other connecting means.

2. A combination light shield and dual roller shade support structure including a shade roll concealing and light shield portion, similarly directed portions unitary therewith at opposite ends of the shield portion and arranged for operative support of adjacent ends of a pair of oppositely extensible roller shades, each similarly directed portion terminating in a hinge pintle support, and a pair of similar hinge leaves mounted upon a window casing, and pintle means for pivotally connecting each leaf and adjacent hinge pintle support, one of said pintle means being removable for shade and shield swinging upon the other pintle axis.

3. A combination light shield and dual roller shade support structure, including a shade roll concealing and light shield portion, similarly directed portions unitary therewith at opposite ends of the shield portion and arranged for operative support of adjacent ends of a pair of oppositely extensible roller shades, each similarly

directed portion terminating in a structure support, and a pair of engaging leaves mounted upon a window casing, and means for connecting each leaf and adjacent structure support, said similarly directed portions being strap-like and substantially parallel, one end thereof being connected to the shield, the other end terminating in the support structure and having a formation complementary to that of the adjacent leaf, the similarly directed portions intermediate the ends having apertures therein for roller shade end reception.

4. A structure as defined by claim 1 wherein the leaves are identical and the similarly directed portions are identical.

5. A structure as defined by claim 1 wherein the leaves are identical.

6. A structure as defined by claim 1 wherein the similarly directed portions are identical.

7. A structure as defined by claim 1 wherein the leaves are substantially concealed by the similarly directed portions and the shield portion.

8. A structure as defined by claim 1 wherein each similarly directed portion including an intermediate lateral offset arrangement.

9. A structure as defined by claim 1 wherein the leaves are identical, and the leaves are substantially concealed by the similarly directed portions and the shield portion.

10. A structure as defined by claim 1 wherein the leaves are substantially concealed by the similarly directed portions and the shield portion, and each similarly directed portion including an intermediate lateral offset arrangement.

11. A structure as defined by claim 1 wherein the leaves are identical, the leaves being substantially concealed by the similarly directed portions and the shield portion, and each similarly directed portion includes an intermediate lateral offset arrangement.

12. A structure as defined by claim 1 wherein one of the leaves includes a fulcrum arrangement, for connection position adjustment.

13. A structure as defined by claim 1 wherein each of the leaves includes a fulcrum arrangement, for connection position and structure adjustment.

14. A structure as defined by claim 1 wherein one of the leaves includes a means seating eye arrangement and a fulcrum arrangement, the latter being formed by the junction of two divergently directed body portions of the fulcrum including leaf, the junction being parallel to the axis of the eye arrangement.

15. A structure as defined by claim 1 wherein one of the leaves includes a means seating eye arrangement and a fulcrum arrangement, the latter being formed by a U-shaped channel spaced from the eye arrangement and substantially parallel thereto.

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