Jan. 3, 1933. A. SEREGI 1,893,182

FOLDING SUNSHADE

Filed March 12, 1932

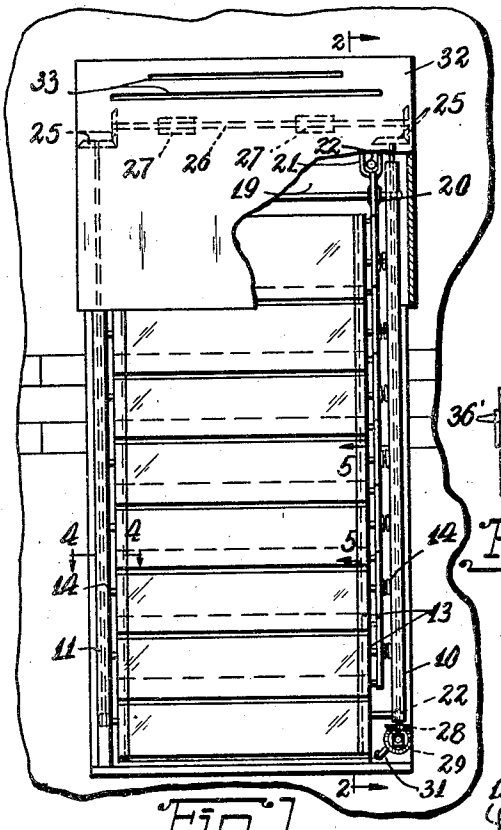


Fig. 1.

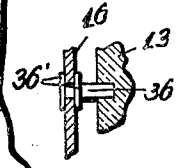


Fig. 8.

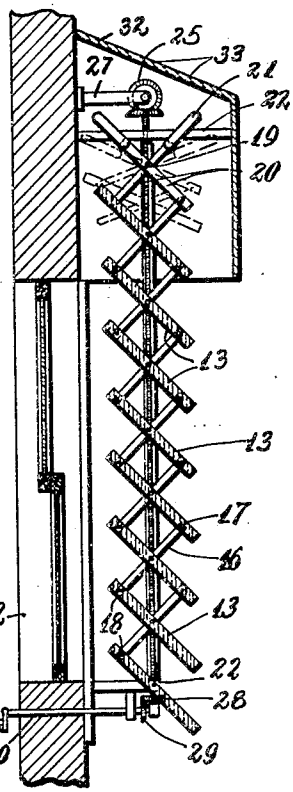


Fig. 2.

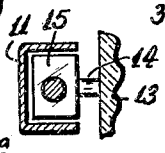


Fig. 4.



Fig. 5.

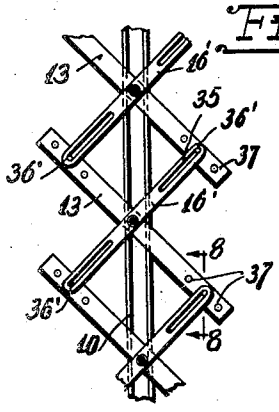


Fig. 6.

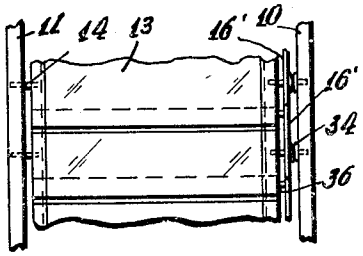


Fig. 7.

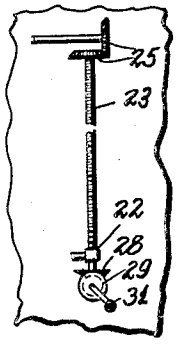


Fig. 8.

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UNITED STATES PATENT OFFICE

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FOLDING SUNSHADE

Application filed March 12, 1932. Serial No. 598,368.

This invention relates to new and useful improvements in a folding sun shade.

The invention has for an object the construction of a folding sun shade which is characterized by a plurality of panes of sun resistant glass adapted to assume positions across the front of a window.

As a still further object of this invention it is proposed to provide means whereby the panes may be raised to a position above the window whenever desired.

As a still further object of this invention it is proposed to support the panes at inclinations and in a vertical row so that air may easily pass between them but the rays of the sun be limited to shine through the panes.

As a still further object of this invention it is proposed to provide an awning located above the window into which the panes may be moved.

Furthermore, as another object of this invention it is proposed to provide a lazy tong structure associated with the panes into a raised position above the window.

Another object of this invention is the construction of an article of the class described which is of simple durable construction, dependable in use and efficient in operation and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a front elevational view of a folding sun shade, according to this invention, mounted upon a window.

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary detailed view similar to a portion of Fig. 1 but illustrating the pane lifting mechanism in detail.

Fig. 4 is a fragmentary horizontal sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is a fragmentary face view of a glass pane used in the device.

Fig. 6 is a fragmentary view illustrating a modification.

Fig. 7 is a fragmentary front elevational view of Fig. 6.

Fig. 8 is a fragmentary sectional view taken on the line 8—8 of Fig. 6.

The folding sun shade, according to this invention, comprises a pair of vertical tracks 10 and 11 for attachment in opposite sides of a window. These tracks are shown supported on opposite sides and to the front of a window 12. A plurality of sun-resist panes 13 of any suitable transparancy or color are arranged between the tracks 10 and 11. Each of the sun-resist panes have end trunnions 14 projecting from opposite ends and slidably engaging the tracks 10 and 11. More particularly, each of the trunnions 14 engage in sliding members 15 which work within the tracks 10 and 11 which are in the form of channel members as clearly shown in Fig. 4.

A lever 16 is pivotally mounted on each of the trunnions 14 on one of the ends of the panes 13 and is pivotally connected at its upper end 17 with the lower end of the upper adjacent pane and pivotally connected at its lower end 18 with the upper end of the lower adjacent pane. These levers are in conjunction with the panes forming a lazy tong structure and serve to hold the panes 13 in a vertical row and in inclined positions. When viewed from the front the panes overlap so as to make it impossible for the sun to shine through them but wind may pass between the panes since they are parallel to each other and spaced apart.

A means is provided for supporting the upper end of the lazy tong structure above the window. This means comprises a bar 19 attached between the upper ends of the tracks 10 and 11. A pair of crossed levers 20 are pivotally mounted upon the bar 19 and have their lower ends respectively connected with the upper end of the uppermost pane 13 and the upper end of the uppermost lever 16. The arrangement is such that the lower pane 13 may be raised to collapse the lazy tong structure above the window 12. The free

ends of the levers 20 are in the shape of forks 21 which engage transverse bars 22' connected with the upper ends of the tracks 10 and 11 and attached upon the outside of the building. The forks serve to act as stops to limit the extension of the lazy tong structure.

A means is provided for collapsing the lazy tong structure to a position above the window and comprises slide 22 attached upon the pinions of the lower pane 13 and threadedly engaging screws 23 rotatively supported within the tracks 10 and 11. These screws are connected for unison rotation by bevel gears 25 at the tops of the screws and upon the ends of a rod 26 rotatively supported in bearings 27 mounted upon the outside of the building. The lower end of one of the screws 23 is provided with a bevel gear 28 in mesh with another bevel gear 29 upon a shaft 30 extended into the room of a house and equipped with a handle 31 to facilitate manual turning to cause the raising and lowering of the lazy tong structure. An awning 32 is mounted above the window 12 and is adapted to house the folding sun shade in its collapsed position above the window. This awning is formed with openings 33 to allow the passage of air so that on windy days it will be in a better position to restrain the damaging action of the wind.

In Fig. 5 the pane 13 is shown with a pair of slots 13^a having enlarged openings 13^b for the insertion of the heads of any suitable trunnion to support the said pane.

In Figs. 6, 7 and 8 a modified form of the invention has been disclosed in which provision is made for holding the panes at various different inclinations relative to the lazy tong structure to adjust in the event of annoying light reflection from any of the panes. More particularly, each of the levers 16' which are pivotally mounted upon the trunnions are also slidably arranged and urged towards the panes by coaxial spring 34 upon the trunnions acting between the track 10 and the lever. At the ends the lever 16' is formed with elongated slots 35 in which pegs 36 are slidably mounted. These pegs have flanges 36' on opposite sides of the lever 16' so that they may not be withdrawn from the slots 35. The pegs 36 are engageable in one of a series of openings 37 formed in the sides of the panes which allows for the adjustment desired.

The operation of the device may be traced by assuming it in the position illustrated in Fig. 2. To raise the folding sun shade it is merely necessary to turn the handle 31 which causes the screws 23 to turn correspondingly and the followers 22 to move along the screws and lift the lower pane 13. The motion will be transmitted by the lazy tong structure to all the panes and they will simultaneously assume a folded position beneath the awning 32.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. A folding sun shade, comprising a pair of vertical tracks for attachment on opposite sides of a window, sun-resist glass panes between said tracks, trunnions projecting from opposite ends of said panes and slidable on said tracks, a lever pivoted on each of the trunnions and pivotally connected at its upper end to the lower side of the adjacent upper pane and pivotally connected at its lower end to the upper side of the adjacent lower pane forming a lazy tong structure with the panes held in a vertical row at inclined positions when the lazy tong structure is expanded, means for supporting the upper end of the lazy tong structure above the window, and means for collapsing the lazy tong structure to a position above the window, the outer ends of said levers being formed with slots to allow opening and closing of the lazy tong structure.

2. A folding sun shade, comprising a pair of vertical tracks for attachment on opposite sides of a window, sun-resist glass panes between said tracks, trunnions projecting from opposite ends of said panes and slidable on said tracks, a lever pivoted on each of the trunnions and pivotally connected at its upper end to the lower side of the adjacent upper pane and pivotally connected at its lower end to the upper side of the adjacent lower pane forming a lazy tong structure with the panes held in a vertical row at inclined positions when the lazy tong structure is expanded, means for supporting the upper end of the lazy tong structure above the window, and means for collapsing the lazy tong structure to a position above the window, said means for supporting the upper end of the lazy tong structure comprising a rod attached upon the upper ends of said tracks, and a pair of crossed levers pivotally mounted upon said rod and having lower ends respectively connected with the upper ends of the uppermost pane and lever.

3. A folding sun shade, comprising a pair of vertical tracks for attachment on opposite sides of a window, sun-resist glass panes between said tracks, trunnions projecting from opposite ends of said panes and slidable on said tracks, a lever pivoted on each of the trunnions and pivotally connected at its upper end to the lower side of the adjacent upper pane and pivotally connected at its lower end to the upper side of the adjacent lower pane forming a lazy tong structure with the

panes held in a vertical row at inclined positions when the lazy tong structure is expanded, means for supporting the upper end of the lazy tong structure above the window, and means for collapsing the lazy tong structure to a position above the window, comprising screws rotatively mounted upon said tracks, followers threadedly engaging upon said screws and connected with the lowermost of said trunnions.

4. A folding sun shade, comprising a pair of vertical tracks for attachment on opposite sides of a window, sun-resist glass panes between said tracks, trunnions projecting from opposite ends of said panes and slidable on said tracks, a lever pivoted on each of the trunnions and pivotally connected at its upper end to the lower side of the adjacent upper pane and pivotally connected at its lower end to the upper side of the adjacent lower pane forming a lazy tong structure with the panes held in a vertical row at inclined positions when the lazy tong structure is expanded, means for supporting the upper end of the lazy tong structure above the window, and means for collapsing the lazy tong structure to a position above the window, said vertical tracks being of channel shape and arranged with the arms directed towards each other, screws rotatively supported within said channels, means connecting the screws for unison motion, means for turning one of the screws, and followers threadedly engaged upon the screws and connected with the trunnions upon the lowermost sun-resist glass pane.

In testimony whereof I have affixed my signature.

ANTHONY SEREGI.