

July 3, 1934.

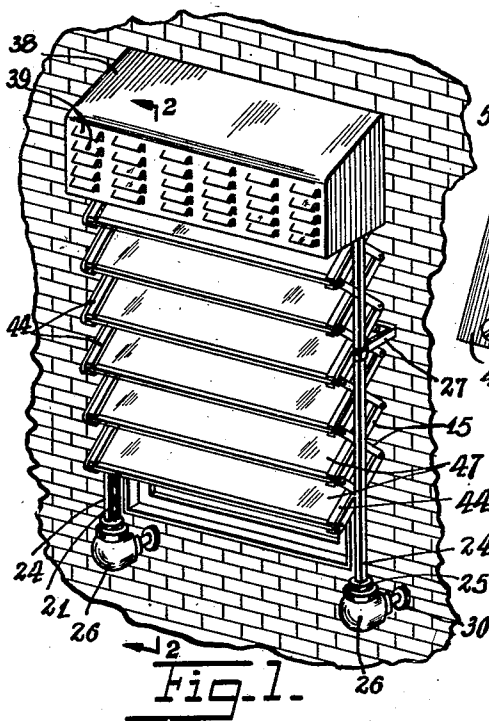
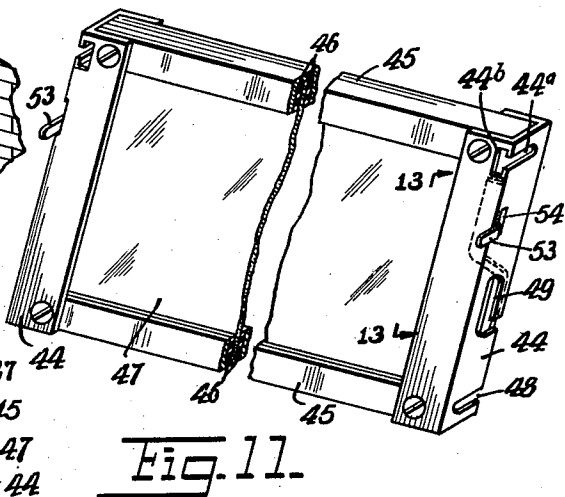
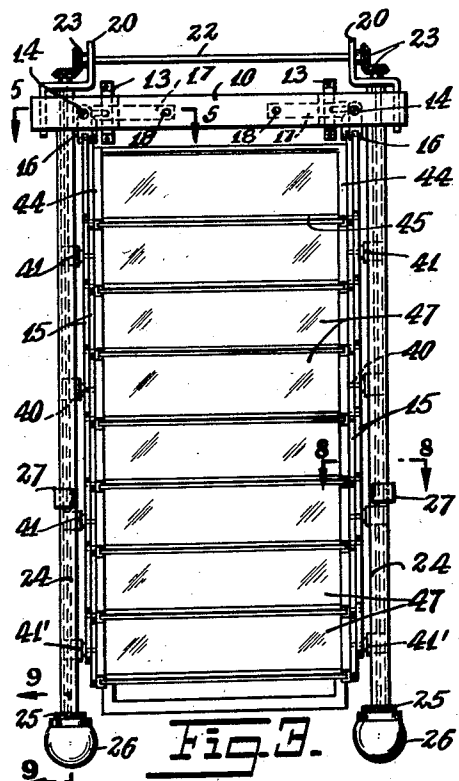
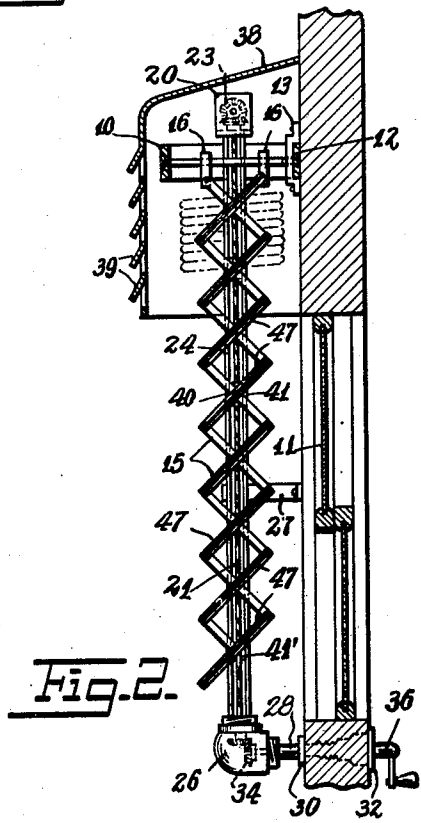
A. SEREGI

1,965,262

FOLDING SUNSHADE

Filed Oct. 23, 1933

2 Sheets-Sheet 1



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A. SEREGI

1,965,262

FOLDING SUNSHADE

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2 Sheets-Sheet 2

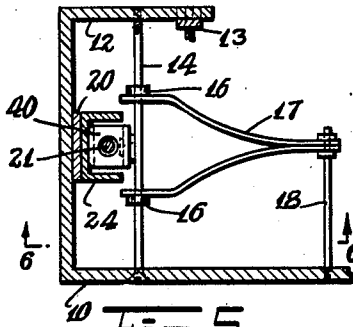


Fig. 5.

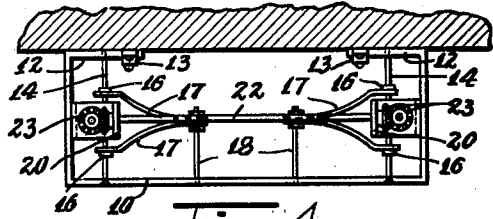


Fig. 4.

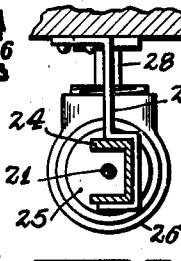


Fig. 8.

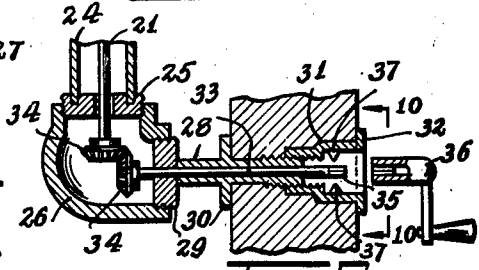


Fig. 9.

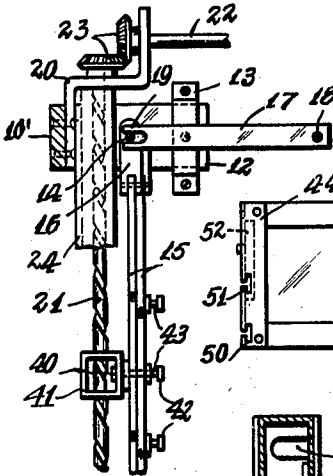


Fig. 6.

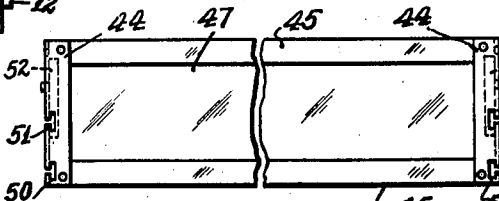


Fig. 12.

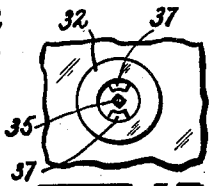


Fig. 10.

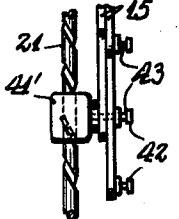


Fig. 7.

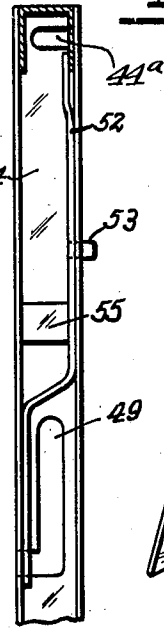


Fig. 13.

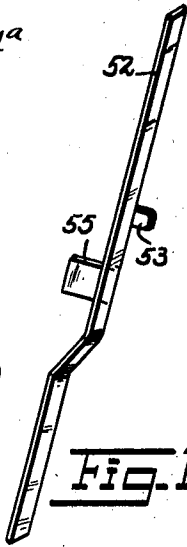


Fig. 14.

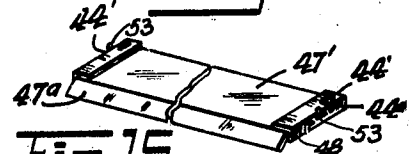


Fig. 15.

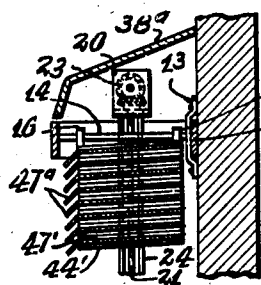


Fig. 16.

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1,965,262

FOLDING SUNSHADE

Anthony Seregi, New York, N. Y.

Application October 23, 1933, Serial No. 694,759

11 Claims. (Cl. 156—17)

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

The invention has for an object the construction of a sun shade which as characterized by a novel and neat arrangement of the various members which compose the sun shade.

Still further the invention proposes in a sun shade the arrangement of a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, and an arrangement for supporting numerous sun shade frames from said support rods.

Still further the invention contemplates the arrangement of a lazy tong for each of the support rods mentioned in the previous paragraph and having their upper ends slidably supported upon the support rods and depending at the sides of said window, and sun ray frames detachably mounted on the elements of the lazy tongs and between the lazy tongs.

Furthermore as another object of this invention it is proposed to attach several brackets on the horizontal frame previously mentioned and to support a pair of vertical screws to the outer side of the lazy tongs and to support a horizontal shaft, and the horizontal shaft and vertical screws to be connected for unitary rotation and arranged to control the raising and lowering of the sun shade.

Furthermore as another object of this invention it is proposed to arrange an element attached upon the top frame and to encase the vertical screws and to terminate at the bottom in plugs threadedly engaging in elbows connected with tubular elements for extending through the window frame into the interior of the building and equipped with mechanism by which the vertical screws may be rotated to cause the operation of the sun shade.

Still further the invention proposes the construction of a device as mentioned which is simple and durable and which may 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 drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

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

Fig. 1 is a perspective view of a portion of the exterior of a building showing a window equipped for a sun shade according to this invention.

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

Fig. 3 is a front elevational view of Fig. 2 illustrated with the top cover of the sun shade removed.

Fig. 4 is a plan view of Fig. 3.

Fig. 5 is a fragmentary horizontal sectional view taken on the line 5—5 of Fig. 3.

Fig. 6 is a fragmentary sectional view taken on the line 6—6 of Fig. 5.

Fig. 7 is a fragmentary detailed view of the lower portion of the lazy tongs to illustrate the association of the lazy tong with the screws.

Fig. 8 is a fragmentary enlarged horizontal sectional view taken on the line 8—8 of Fig. 3.

Fig. 9 is a fragmentary enlarged vertical sectional view taken on the line 9—9 of Fig. 3.

Fig. 10 is an elevational view looking in the direction of the line 10—10 of Fig. 9.

Fig. 11 is a perspective view of one of the sun ray frames used in the sun shade, a portion thereof being broken away to simplify the illustration.

Fig. 12 is a view of the reverse side of Fig. 11.

Fig. 13 is a fragmentary elevational view of one of the end members of the sun ray frame seen as though looking in the direction of the line 13—13 of Fig. 11.

Fig. 14 is a perspective view of the latch element which is slidably arranged in the end element of the sun frame.

Fig. 15 is a perspective view similar to Fig. 11 by showing another form of sun ray frame.

Fig. 16 is a fragmentary sectional view similar to Fig. 2, showing the application of the sun ray frame illustrated in Fig. 15.

The sun shade according to this invention comprises a horizontal top frame 10 for attachment above a window 11. The frame 10 is shown to comprise a strip of material having a front portion, side portions and end portions 12 in intimate contact with the face of the building. The manner of attaching the frame in place comprises a clamp or keeper 13 extended over each of the end portions 12 and secured by screws or the like upon the building wall. A pair of support rods 14 are mounted upon the frame 12 and are arranged at right angles to the window 11. Each of these support rods engages through the front side of the frame 10 and the rear portions 12.

A lazy tong structure 15 is provided on each of the support rods 14 and have their upper ends slidably supported upon the support rods in a manner so that the lazy tong structure depends

at the side of the window. More particularly each of the upper ends of the arms of each lazy tong structure is attached pivotally upon a slide member 16 which slidably engages on the support rods 14. A resilient means or other arrangement is provided for normally urging the upper ends of each of the lazy tongs away from each other so as to cause retraction of the lazy tong structure. This means comprises a stiff spring 17 for each of the lazy tong structures supported by a bolt 18 upon the frame 10 and having its ends formed with cutouts 19 so as to partially surround the rods 14 and so as to engage against the inner sides of the slides 16.

Brackets 20 are attached upon the frame 10 and rotatively support a pair of vertical screws 21 to the outer sides of the lazy tong structures 15 and a horizontal shaft 22 above the lazy tong structures. Each of these brackets comprises merely a strip of material having a vertical bottom end attached upon the sides of the frame 10, having horizontal intermediate portions through which the upper ends of the screws 21 engage, and having vertical upward directed inner ends from which the ends of the shaft 22 engage. A means is provided for connecting the shaft 22 and the screws 21 for unitary rotation and comprises bevel gears 23 arranged respectively upon the ends of the shaft 22 and the upper ends of the screws 21.

Elements 24 are attached at their upper ends upon the frame 10 and shield the screws 21 and have their lower ends connected with plugs 25 threadedly engaging in elbows 26. Each of the elements 24 comprises a channel member. These members are arranged opposite to each other so that their arms are directed toward each other and so partially encase the screws 21. Braces 27 connect intermediate the ends of the channel members 24 and are arranged upon the window frame 11 or the wall of the building so as to aid in supporting the sun shade. The lower ends of the channels 24 may be sweated or in any other manner attached upon the plugs 25. The plugs 25 engage in the upper ends of the elbows 26 and the elbows are arranged to have their ends directed at right angles towards the wall of the building. Tubular elements connect with the latter mentioned ends of the elbows 26 and extend into the interior of the building. These tubular elements comprise a tubular element 28 for each of the elbows 26 connected with a plug 29 threadedly engaged into the ends of the elbow 26. The element 28 is provided with a flange 30 engaged against the outside of the wall. The end of the tubular element 28 partially extends through the wall and threadedly connects with another tubular element 31 which is extended in from the inside of the wall, and is provided with a flange 32 engaging the inner face of the wall. The flanges 31 and 32 serve to clamp against the wall and so aid in maintaining the sun shade in place.

A means is provided for rotating the screws 21 selectively from the interior of the building and comprises a shaft 33 rotatively engaged through each of the tubular elements 20 and equipped with bevel gears at the inner ends meshing with similar bevel gears upon the bottom ends of the screws 21. The inner ends of the shafts 33 are equipped with square portions 35 adapted to receive the ends of the turning tool 36 by which the device may be operated. The tubular element 31 is shown with internal projections 37 adapted to partially shield the extended end of

the shaft 33 to prevent any possibility of manual turning of the shaft by children or others not equipped with the proper turning tool.

A hood is provided for covering the portion of the sun shade, and in fact housing all of the sun ray frames when in their raised positions. The hood comprises a hollow sheet metal or similar element 38 attached upon the building and having closed ends, a closed front and a closed top, and an open bottom through which the sun shade extends. The front of the hood 28 is formed with a plurality of pressed out portions 39 forming passages therebetween for the air. The passages act as ventilators. The hood terminates at the upper edge of the window 10 so as not to obstruct ventilation through the window.

Each of the lazy tongs 15 have pegs 40 projecting from various elevations therefrom and engaging in slides 41 freely slidable upon the screws 21 so as to support the lazy tong structures during their motion. The lowermost of these slides indicated by the reference numeral 41' is threadedly engaged with the screw. The arrangement is such that when either of the screws 21 is caused to rotate the slide 41 will lift or lower, depending upon the direction of rotation of the screws 21, the lower end of the lazy tong and so contract or expand the lazy tong structure. The lazy tong structure is composed of elements pivotally mounted intermediate by headed pegs 42 and pivotally connected with adjacent elements also by headed pegs 42. These headed pegs have shanks 43, an arrangement necessary for the detachably mounting of sun ray frames.

A detail of one of the sun ray frames is illustrated in Figs. 11-14 inclusive. Sun ray frames comprise side elements 44 of channel shape connecting with top and bottom elements 45 also of channel shape. The top and bottom elements 45 hold strips of felt 46 extending substantially their entire lengths and support a sheet of transparent material 47 of scientific determination so as to allow beneficial rays of the sun to pass through and restrain others. The material 47 itself forms no part of this invention since such materials are generally known and for this reason further description thereof will not be given. Each of the ends of the sun ray frames, that is the channel shape members 44 have openings by which they may be mounted upon the pegs 42 of the lazy tong structures.

More particularly each of the channel shaped members 44, have a slot 44^a extended in from one side and located adjacent one end and communicating with a side opening 44^b which latter opening allows the passage of the head of a peg 42 in a manner so that once the head passes, the shank portion, that is, the portion 43 extends through the opening 44^a. The opening 44^b is arranged upon the side of the channel shaped member 44 which is opposite the entrance of openings 48 and 49. The opening 48 is more similar to the opening 44^a except for the fact that it connects with the side opening 50 for the engagement of the head of the peg from the other side of the sun ray frame. The center opening 49 is of longitudinal construction, but connects with a reduced side opening 51 of similar shape as the opening 50. A catch is arranged within each of the channel shaped members 44 and comprises a strip of material 52 slidable within the channel by reason of an inlet 53 extending through a slot 54 and a guide portion 55 working within said arms of the channel. One of the ends of the strip 52 is adapted

to engage over the opening 44^b to prevent the shank portion 43 of the peg from coming out once engaged. The other end of the strip 52 extends to the other side of the channel member 54 and is adapted to engage over the opening 51 to hold the peg within the opening 49. The slide 52 is so arranged that when one of the openings, for example, the opening 44^a is unrestricted, then the other end of the strip engages over the mouth of the opening 49.

Each of the sun ray frames are adapted to be engaged across one of the elements of each of the lazy tong structures. Examining Fig. 2 it will be noticed that certain of the elements of the lazy tong structures have three pegs 42, one at the center and one at each end. The frame may be connected so that by first moving the handle 53 in one direction the mouth of the center opening 49 is unrestricted. The frame may then be simultaneously slid at both ends upon the central pegs 42 of a pair of elements of the lazy tong structure. The frames may be moved with the shanks 43 of the pegs at the base of the openings 49. Then the catch strips 52 must be moved over the frame's pivot so that the pegs 42 at one of the ends of the lazy tong elements may pass through the openings 44^b and the pegs 42 at the other of the ends of these lazy tong elements simultaneously pass through the openings 50. Next the latch must be moved into its operative position by moving the handle 53 so that the ends of the strips 52 close the entrance of the openings 44^a. The frames are now detachably mounted in place. The sun ray frames should be arranged so as to slope in the same direction and arranged so that when the lazy tongs are completely retracted all of the sun ray frames are substantially horizontal and adjacent each other. Furthermore when the lazy tongs are completely extended all of the sun ray frames slidably overlap when viewing from the horizontal.

The operation of the device consists in engaging the turning tool 36 upon one or the other of the shafts 33 for rotating and screws 21. Rotations from the screws will cause the elements 41' to move upwards or downwards depending merely upon the direction of rotation. As the frame elements 45 move they will correspondingly collapse or extend the lazy tong structures and so the sun ray frames will be moved together or apart as desired. When the sun shade is completely collapsed all of the sun ray frames will be disposed substantially horizontal within the hood 38. A desirable position for the sun shade will be one in which all of the sun ray frames are arranged at an inclination to the vertical to allow the passage of the air and at the same time to restrain the free passage of the sun. This position is illustrated in Fig. 2. The sun ray frames can be seen in dotted lines behind certain of the elements of the lazy tong structure.

The Figs. 15 and 16 are views in which a modified form of the sun ray frame is shown. The side elements 44' of the frame support non-transparent metallic material 47' which is bent at a longitudinal edge 47^a to form a protecting edge, for its lower adjacent sun ray frame. In other respects this arrangement is similar to the preferred form of the invention and corresponding numerals may be recognized for corresponding parts.

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 re-

served 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 sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws.

2. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said horizontal top frame comprising a strip of material bent to have a front portion, end portions and rear portions in intimate contact with a wall provided with said window

3. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said horizontal top frame comprising a strip of material bent to have a front portion,

end portions and rear portions in intimate contact with a wall provided with said window, and braces extended beneath the rear ends of said frame accomplishing the attachment of the

5 frame in place.

4. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said horizontal top frame comprising a strip of material bent to have a front portion, end portions and rear portions in intimate contact with

20 a wall provided with said window, said support rods being extended between the front portion of the frame and the rear ends.

5. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said brackets comprising strips of material having vertical portions attached upon said frame and extending above said frame and having horizontal portions supporting the vertical screws and vertical portions from said horizontal portions supporting said horizontal shade.

6. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having

75 plugs at the bottom ends engaging elbows, tu-

bular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said screw shielding elements comprising channels arranged to be opposed to each other with their arms directed towards each other, said screws being arranged between the arms of said channels.

7. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, said tubular elements comprising sections extending through the window frame and having flanges disposed against the outer faces of the frame associated tubular elements and flanges threadedly engaged with each other.

8. A sun shade, comprising a horizontal top frame for attachment above a window, a pair of support rods on said frame and at right angles to the window, a lazy tong for each of said support rods and having their upper edges slidably supported on said support rods and depending at the sides of said window, sun ray frames detachably mounted on the elements of the lazy tongs and between said lazy tongs, brackets attached on said frame and rotatively supporting a pair of vertical screws to the outer sides of said lazy tongs and a horizontal shaft above said lazy tongs, means for connecting said shaft and screws for unitary rotation, elements attached upon said top frame and shielding said screws and having plugs at the bottom ends engaging elbows, tubular elements extended from the other ends of said elbows and extending through said window into the interior of a building, and an operating shaft through each of said tubular elements associated with means for rotating said screws, comprising bevel gears upon said shafts engaging similar bevel gears upon the lower ends of said vertical screws.

9. In combination with a sun shade having opposed lazy tong structures with certain elements thereof equipped with a central and with end projecting pegs, a sun ray frame including end elements having a central opening for the central peg and end openings for the end pegs, and a latch for closing certain of said openings.

10. In combination with a sun shade having opposed lazy tong structures with certain elements thereof equipped with a central and with end projecting pegs, a sun ray frame including end elements having a central opening for the central peg and end openings for the end pegs, and a latch for closing certain of said openings, said latch including a handle extending through slots in said end elements.

11. In combination with a sun shade having opposed lazy tong structures with certain elements thereof equipped with a central and with end projecting pegs, a sun ray frame including end elements having a central opening for the central peg and end openings for the end pegs, and a latch for closing certain of said openings, said latch including a handle extending through slots in said end elements, the openings extending from the sides of said inner frame to provide for engaging the sun frame upon the center pegs first, and then pivoting the sun frame to cause the end pegs to engage in the associated end openings.

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