July 19, 1938. J. M. THORP 2,124,240

SOLAR WINDOW

Filed Oct. 17, 1936 2 Sheets-Sheet 1

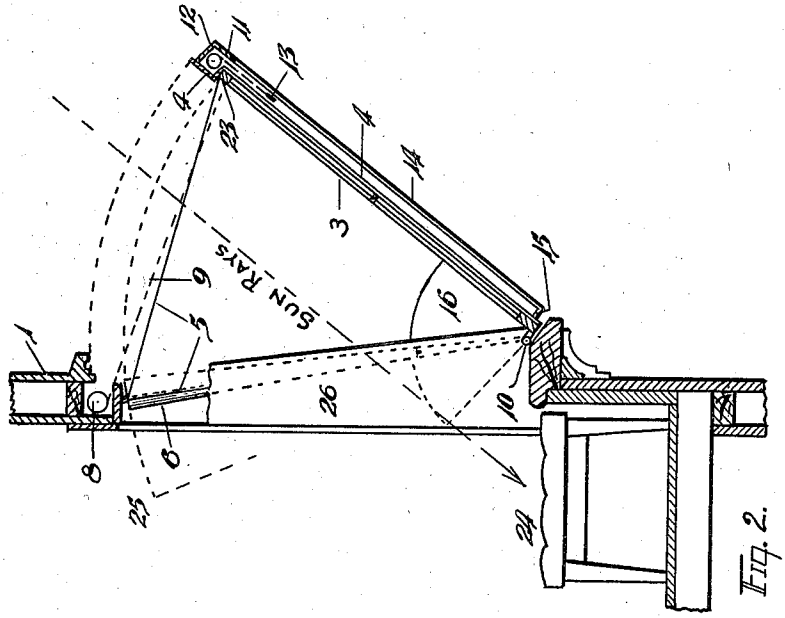


Fig. 2.

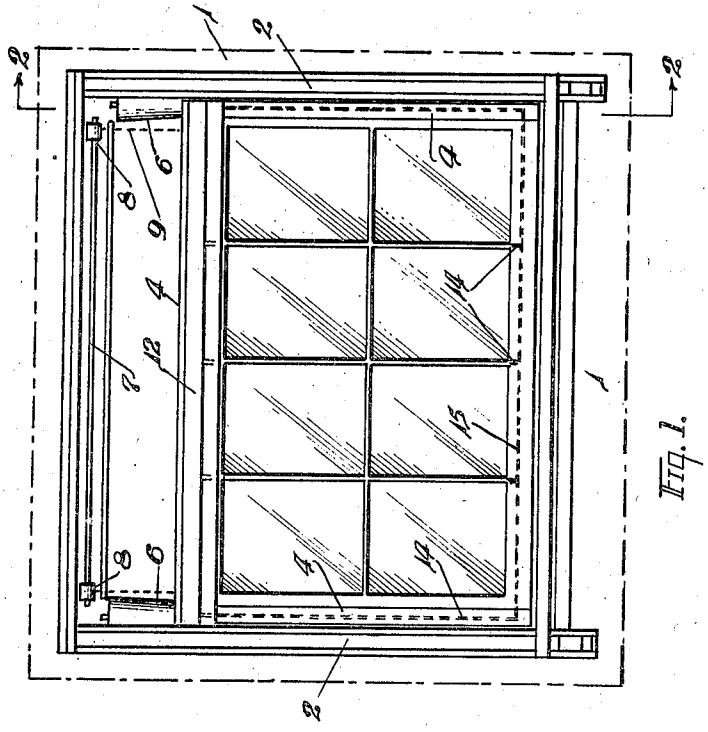


Fig. 1.

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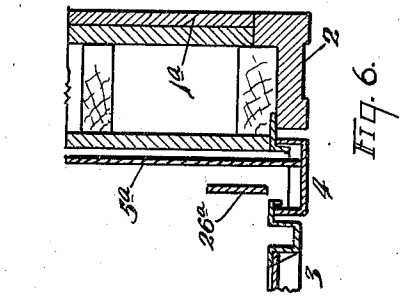


Fig. 6.

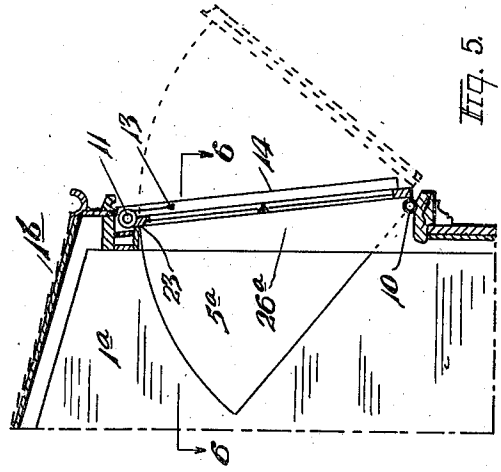


Fig. 5.

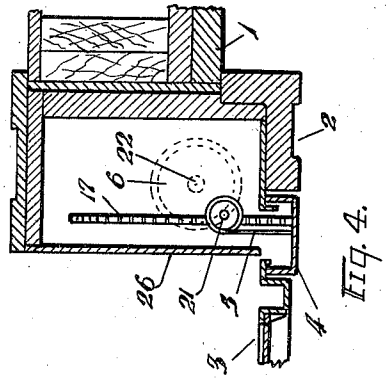


Fig. 4.

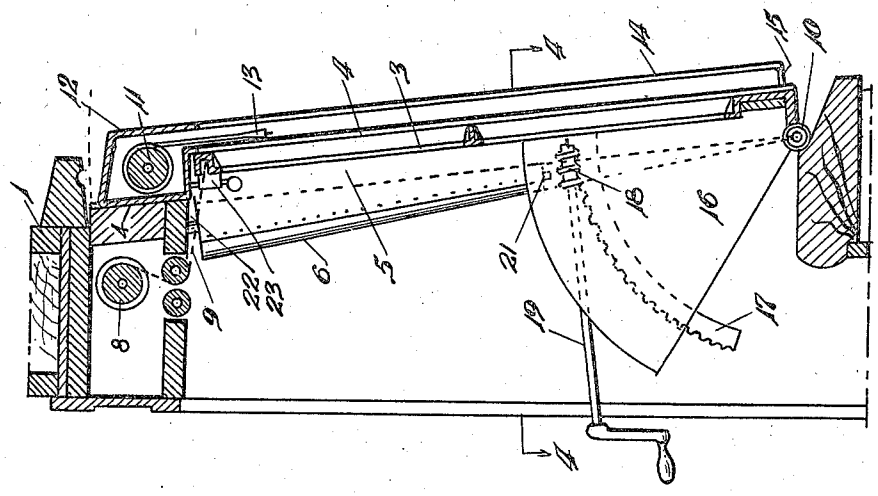


Fig. 3.

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Patented July 19, 1938 2,124,240

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2,124,240

SOLAR WINDOW

James Madison Thorp, Alameda, Calif.

Application October 17, 1936, Serial No. 106,142

5 Claims. (Cl. 20—40)

My invention relates to solar windows for sun-bathing, and especially to all-year sun bathing in the nude, and the objects thereof are to provide a window adapted for installation in dwelling houses and so constructed that the nude bather may be exposed to the full rays of the sun or to a reduced transmission of the ultraviolet rays through special glass and at the same time be screened from outside view, and in cold but sunny weather from outside cold.

I attain these objects by the special construction and mechanism illustrated in the accompanying drawings, in which—

Fig. 1 is a front elevation showing the window tilted outward as in Fig. 2; Fig 2 is a vertical section on line 2—2 of Fig. 1; Fig. 3 an enlarged detailed section of Fig. 2, except that in this figure the proportionate height is reduced to one-third and the window is shown closed and the pocket cover is omitted; Fig. 4 is a detailed section on line 4—4 of Fig. 3, in this figure the worm 18 and shaft 19 being omitted; Fig. 5 is a modification of Fig. 2, showing the window set in a dormer structure, the wall of which is designated by the numeral 1—*a* and the roof by 1—*b*. In this figure the non-flexible end closure 5—*a* being used in place of the wind-up fabric closure 5; and Fig. 6 is an enlarged section on line 6—6 of Fig. 5;

The present invention is an improvement on my recent Patent No. 2,044,030 June 16, 1936, wherein the roll-up fabric closures are fixed to a one piece glazed sash having an inside pull-up shade, whereas the present form consists in a similar sash having an outside independently operated straddle frame that carry the roll-up end closures together with an outside pull-down shade or curtain.

It is well known that ultraviolet rays derived from the sun produce certain health giving vitamins in the body and that comon window glass and even light clothing will screen out these invisible rays. It is also obvious that few people have facilities for proper sun bathing and fewer still for such bathing in the nude, especially in the all-year category.

In the following description reference is had to the drawings in which similar numerals denote similar parts throughout the several views:

The numeral 1 denotes the house wall structure; 2 the fixed window frame set into the house wall; 3 the tilting glazed sash; 4 the straddle frame; 5 the fabric roll-up end closures; 6 the tapered spring-actuated rollers; 7 the spring controlled shaft having spools 8 at each end to wind up the sash balancing cables 9; 10 a continuous shaft upon which both the glazed sash and straddle frame are concentrically pivoted; 11 the shade roller; 12 the roller housing; 13 the pull-down shade for closing the face opening; 14 are rods, one over each vertical sash bar, the upper ends being welded to the roller housing 12 and the lower ends to the bar 15 thus forming a protecting grill outside the shade; 16 is a rigid quadrant closure to cover the gap below the fabric closures 5; 17 a quadrant rack fixed to the straddle frame and is operated by the worm 18, shaft 19 and crank 20. Note the roller 6 is truncated and provided with a bearing pivot at 21 and a spring retaining stem at 22, also that the axis and taper lines, extended, penetrate the sash pivot axis 10, thus the triangular fabric end closures wind evenly on taper rollers. The glazed sash and straddle frame are latched together by the transom catch 23, shown in detail in Fig. 3, and position indicated in Figs. 2 and 5.

In cases, such as a dormer or narrow room the width of which approximates that of the straddle frame, a non-flexible end closure may be used as shown at 5*a* Figs. 5 and 6, and the tapered rollers omitted, these end closures will tilt back alongside the dormer walls 1*a*; 26 shows a pocket cover to end closures 5 and 26*a* a cover to the non-flexible or rigid closure 5*a*.

In operation.—The patient desiring a sun bath with full sun exposure will tilt both the glazed sash and straddle frame outward, while latched together, by means of the gear mechanism, thus unrolling the end closures 5, then the shade or curtain is pulled down, by a cord not shown, to completely screen the bather from outside view, leaving only the top open for the full rays of the sun to fall upon the couch 24 as in Fig. 2; Now in event the sun is too hot or a reduced ultraviolet transmission is desired, the glazed sash may be unlatched, from the straddle frame, and tilted inward to any desired angle so that the sun rays shine through the glass upon the couch and without changing the protecting screen, if while using this reduced transmission ventilation is desired the sash may be tilted to position 25 and still the rays will fall upon the couch, the sash may also be dropped to the couch level for cleaning outside of the glass.

With the window closed as in Fig. 3 and the shade rolled up into the housing 12 it functions as the ordinary house window.

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

1. A solar window, comprising a fixed frame into which is mounted a bottom pivoted, outwardly tilting straddle frame having fabric end closures adapted to wind upon tapered rollers mounted within the fixed frame, a glazed sash set within and pivoted concentrically with said straddle frame and adapted to tilt with or independent thereof, a shade or curtain roller-mounted within the straddle frame and adapted to close the face opening thereof, spring controlled shaft and spools to balance said glazed sash and means for tilting the straddle frame.

2. In solar windows, an outwardly tilting straddle frame having end closures, a curtain adapted to close the face portion of said straddle frame, a grill protecting said curtain, a glazed sash pivoted within the straddle frame and adapted to tilt with said straddle frame or independent thereof, and means for tilting the straddle frame and balancing the glazed sash.

3. A solar window, comprising a fixed frame set within a house wall, a bottom-pivoted outwardly tilting straddle frame having means for closing the ends and face thereof, an outwardly and inwardly tilting glazed sash mounted within said straddle frame and means for tilting and balancing the frame and sash collectively or independently.

4. In solar windows, an outwardly tilting frame having non-flexible end closures, a glazed sash pivoted within said frame and means for tilting and balancing the frame and sash collectively or independently.

5. In solar windows, an outwardly tilting frame having fabric end closures winding upon spring actuated tapered rollers, said rollers being truncated and pivoted at the lower ends, and non-flexible closures for covering the space below said pivoted ends.

JAMES MADISON THORP.