Oct. 9, 1923. 1,470,044

V. M. ALLEN

VENTILATING WINDOW SHADE

Original Filed Aug. 14, 1920 2 Sheets-Sheet 1

Fig. 1.

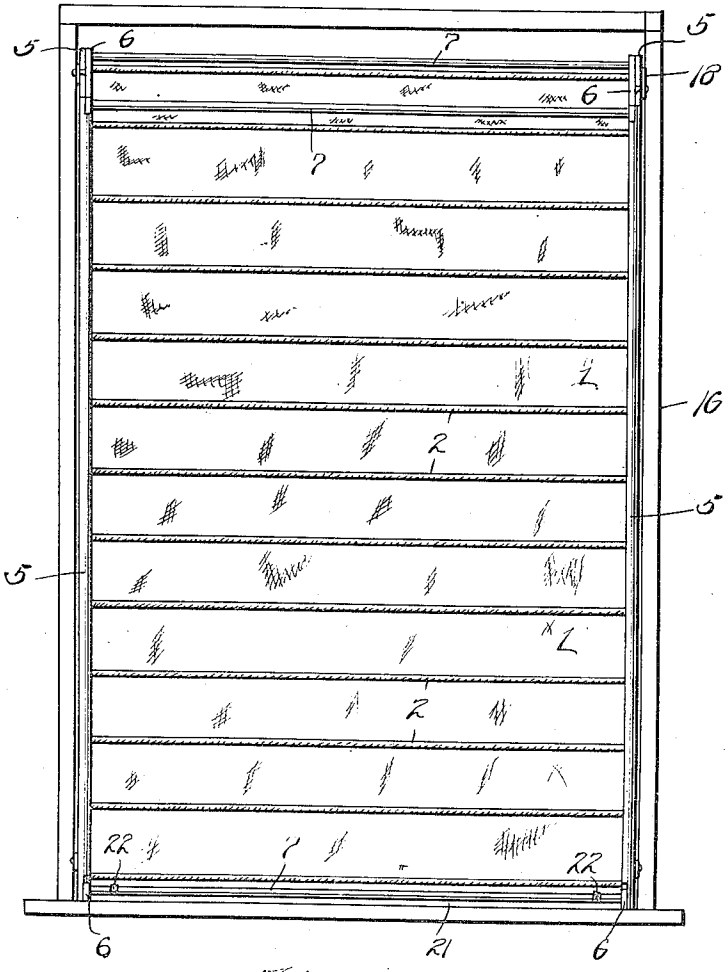


Fig. 3.

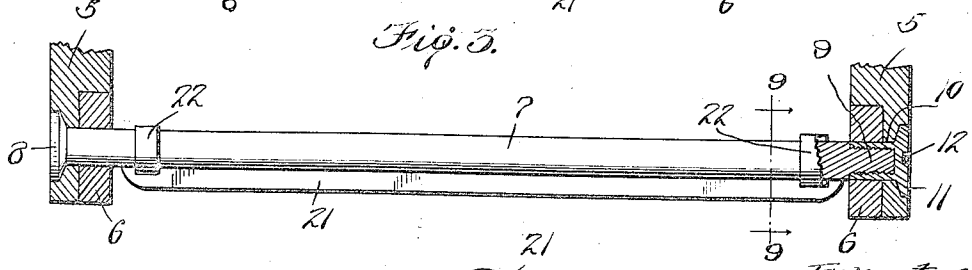
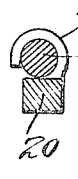


Fig. 9.



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Fig. 2.

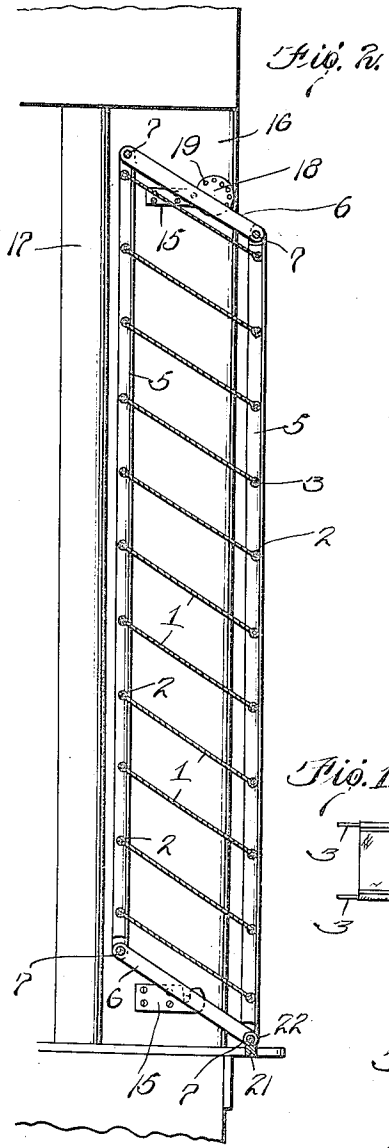


Fig. 4.

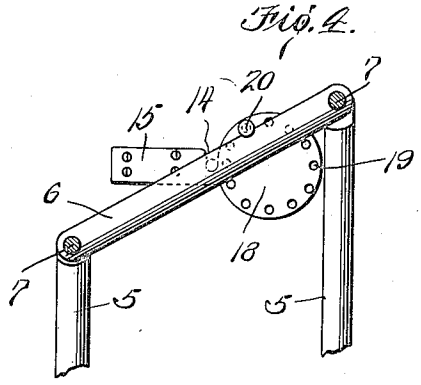


Fig. 5.

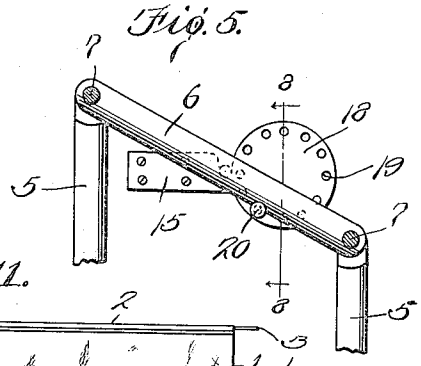


Fig. 11.

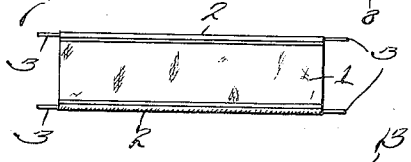


Fig. 10.

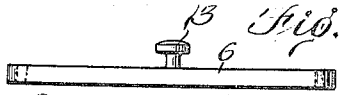


Fig. 6.

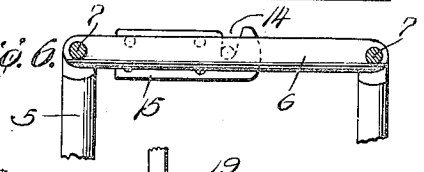


Fig. 7.

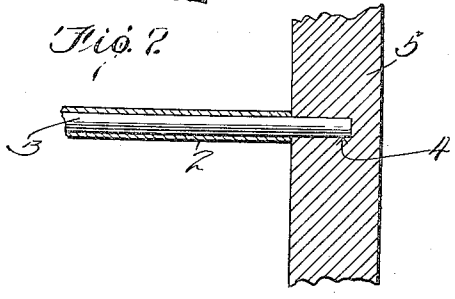
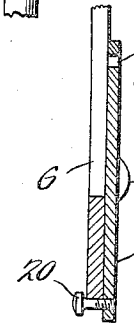


Fig. 8.



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UNITED STATES PATENT OFFICE.

VICTOR M. ALLEN, OF WAVERLY, NEW YORK.

VENTILATING WINDOW SHADE.

Application filed August 14, 1920. Serial No. 403,569. Renewed March 6, 1923.

To all whom it may concern:

Be it known that I, VICTOR M. ALLEN, a citizen of the United States, and a resident of Waverly, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Ventilating Window Shades, of which the following is a specification.

This invention relates to ventilating window shades of the general type shown in Letters Patent No. 1,329,352, granted to me February 3, 1920, the present improvement seeking to simplify the construction and operation without any decrease in efficiency.

A particular object of the present invention is to provide a simple, inexpensive and effective means for holding the shade in a set position, and a further object is to simplify and improve the frame which carries the shade.

A still further object is to provide means whereby the hanging or removal of the shade will be expedited, and other incidental objects will appear in the course of the following description.

One embodiment of the invention is illustrated in the accompanying drawings, wherein

Fig. 1 is an elevation of the ventilating window shade;

Fig. 2 is a vertical section of the shade;

Fig. 3 is an enlarged elevation of the weight-carrying rod with the adjacent parts of the frame in section;

Figs. 4 and 5 are enlarged detail views showing different adjustments of the locking mechanism;

Fig. 6 is a detail elevation of the supporting means;

Fig. 7 is a detail section taken longitudinally of a panel sustaining rod;

Fig. 8 is a detail section on the line 8—8 of Fig. 5;

Fig. 9 is a detail section on the line 9—9 of Fig. 3;

Fig. 10 is a plan view of the end links of the shade-carrying frame; and

Fig. 11 is a detail plan view of one of the shade panels.

In carrying out my present invention, I construct the shade in a plurality of panels 1, each consisting of a strip of textile fabric or other suitable material of proper dimensions having a hem 2 along each longitudinal edge, and a rod 3, inserted through each hem. The rods 3 are longer than the fabric strip so that the ends of the rods project beyond both ends of the fabric as shown in Fig. 11. The rods have their ends engaged in sockets 4 in the frame bars 5 and should be stout enough to hold the fabric strip taut but should be also pliable or resilient so that they will readily spring into the sockets when registering therewith and may be easily withdrawn by flexing. It will be readily understood that this ease of inserting and removing the rods greatly facilitates the work of repairing or replacing a torn or otherwise damaged panel, so that the old panel may be removed and a new one substituted therefor in a few minutes by an unskilled person without the use of any tools. The frame bars 5 may be of wood or light metal but should be sufficiently rigid to maintain the spacing of the rods 3 which are fitted thereto at regular intervals. Obviously there are two frame bars 5 at each edge of the shade and they are connected at their upper and lower extremities by links 6 which are provided at their ends with suitable openings to receive rods 7 which extend between the corresponding bars 5 and form pivots for the links.

Upon reference to Fig. 3 it will be noticed the pivot rod 7 is provided at one end with a head 8 to seat in a socket in the side of the frame bar 5, while its opposite end is somewhat reduced and threaded, forming a tenon 9, to engage in a fastening nut or socket 10 having a head 11, similar to the head 8, seating in the adjacent frame bar and provided with a notch or recess 12, to be engaged by a suitable turning tool. The frame bars are thus effectually held against spreading while being free to move pivotally with respect to the links.

The links are provided on their outer sides midway their ends with headed trunnions 13, which are adapted to seat in notches 14 in the upper edges of bearing plates 15 which are secured to the window frame 16, at the inner side of the sash, indicated conventionally at 17. The trunnions obviously may rock in the notches 14, and their heads will prevent them from pulling laterally from the bearing plates. One of the upper bearing plates is provided with an enlargement 18 having a circular series of openings or sockets 19, in any one of which a stop pin or screw 20, may be engaged to project into the path of the adjacent link and limit the movement of the same under the influ-

ence of a weight 21 which is hung on one of the lower pivot rods 7 by hooks 22 as will be readily understood. As shown in Fig. 2 the weight is hung on the inner rod 7 and tends to pull the inner frame bars 5, and consequently the inner edges of the panels, downwardly, so that the panels incline inwardly and downwardly. If the stop 20 be entirely removed the panels will tend to swing together in overlapping relation so that the entire window will be shaded and no light may pass. If the stop be inserted, however, in position to be engaged by the lower edge of the adjacent link 6, as shown in Fig. 5, the downward movement will be arrested and the shade will be held in a set position determined by the location of the stop, the spaces between the different panels will be unobstructed and air from the open window may pass to ventilate the room. Should there be an abnormal increase of wind, the shade will not be blown about but the panels will assume a horizontal position so as to present their edges to the wind and permit it to pass freely, the links 6 rocking on their trunnions 13 to accommodate the movement, as will be readily understood. If it be desired to have the downward inclination of the panels toward the window, or outwardly, the weight 21 is shifted to the outer rod 7, and the stop 20 arranged above the link 6, as shown in Fig. 4. The action under a high wind is then the same as before except that the rocking is in the opposite direction.

The shade is supported at both top and bottom so that it cannot flap around and destroy or damage furnishings near the window but it can obviously be adjusted to admit any desired volume of air and light. When it is desired to clean the window, the shade may be removed by merely lifting the trunnions 13 from the seats 14.

It is obvious that the panels or louvers may be made of wood or light metal and be used for porch shades or Venetian blinds.

It is also obvious that there are no angles or hollow spaces present in any of the parts and that the device may be packed for shipping with absolutely no waste of space and may be shipped by mail if desired.

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

1. The combination of fixed brackets having notches in their upper edges, foldable frames, headed trunnions on said frames between the sides of the same at the ends thereof to seat in said notches and engage over the edges of the brackets whereby to pivotally support the frames in balanced position, spaced panels carried by said frames, gravitating means tending to hold the panels in a vertical position, and means for limiting the movement of the panels toward the vertical position.

2. The combination of fixed brackets having notches in their upper edges, an extension at the end of one of the brackets having a series of sockets extending above and below the horizontal plane of the bracket, foldable frames having trunnions engaging in the notches in the brackets, a shiftable gravity device hung on the frames to tend to effect folding thereof, a stop pin insertible in one of said sockets to bear against an adjacent member of the foldable frames and limit the folding movement of the frames, and spaced panels carried by said frames.

3. A ventilating window shade comprising pairs of vertical bars, links extending between corresponding ends of the bars of each pair of bars, the bars having seats in their outer sides, pivot rods inserted transversely through the meeting ends of the links and the bars, said rods being each provided at one end with a head fitting in one of the seats in one of the bars, and a headed nut engaging over the opposite end of the rod and fitting in the adjacent seat in the bar.

4. In a ventilating window shade, the combination of frame bars, links extending between the ends of the frame bars, pivot rods connecting the ends of the links to the adjacent ends of frame bars, a weight bar having hooks encircling one of the lower pivot rods, and spaced panels carried by the frame bars.

Signed at Waverly, New York, this fifteenth day of March 1920.

VICTOR M. ALLEN.