Feb. 16, 1926. 1,573,159

L. N. GROSS

VENTILATED SUNSHADE

Filed May 7, 1923 2 Sheets-Sheet 1

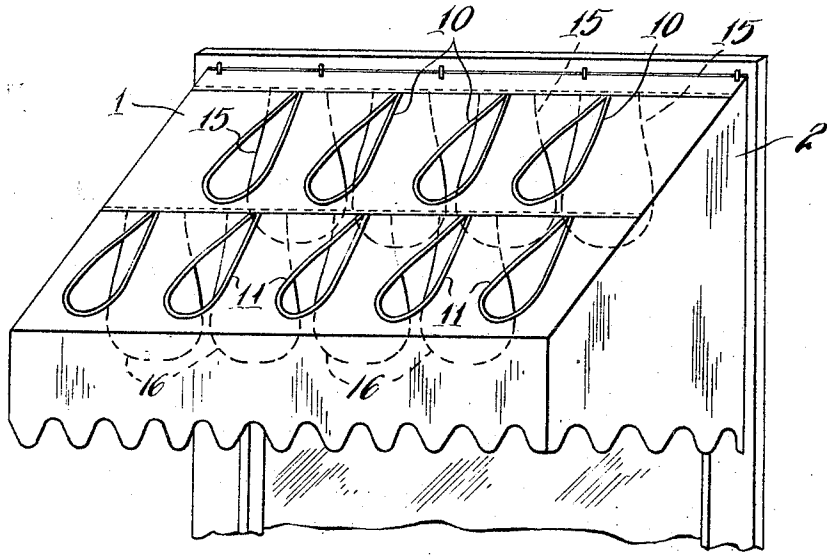


Fig. 1

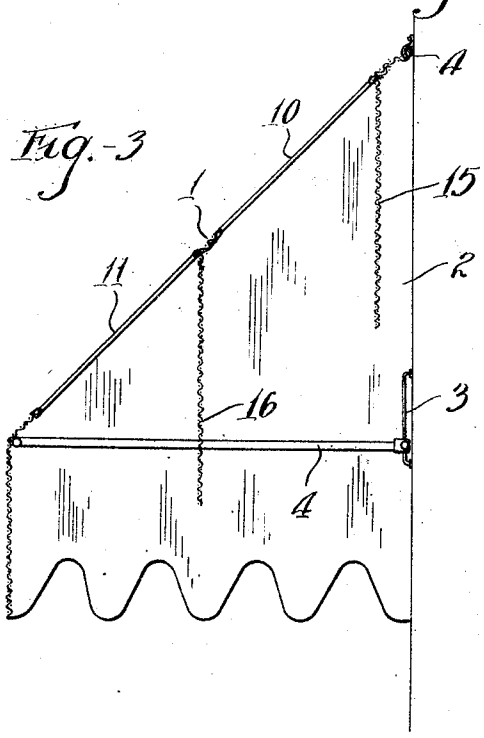


Fig. 3

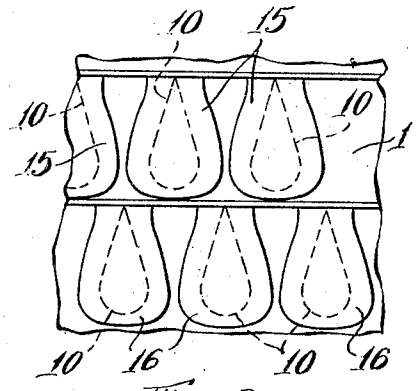


Fig. 2

INVENTOR

Louis N. Gross,

BY Watts & Macklin,

ATTYS.

Feb. 16, 1926. 1,573,159

L. N. GROSS

VENTILATED SUNSHADE

Filed May 7, 1923 2 Sheets-Sheet 2

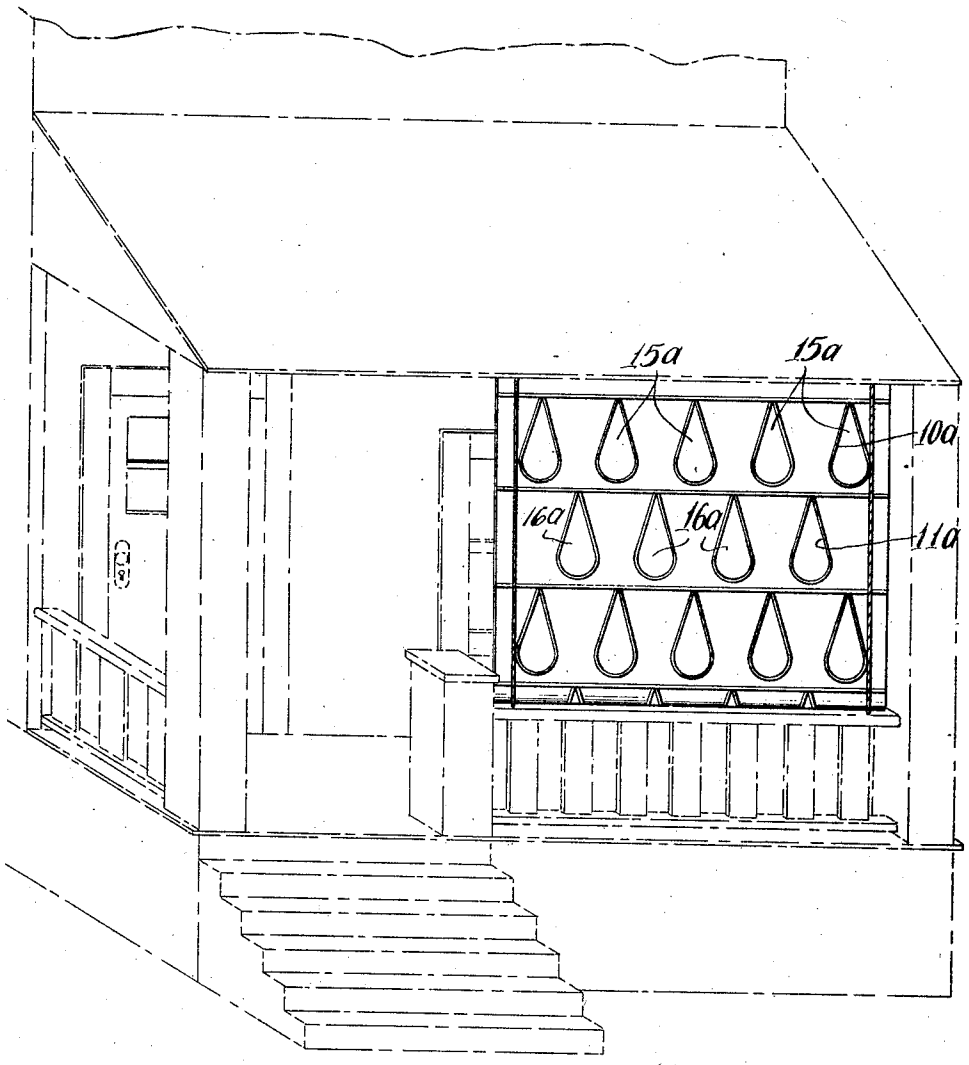


Fig.-4

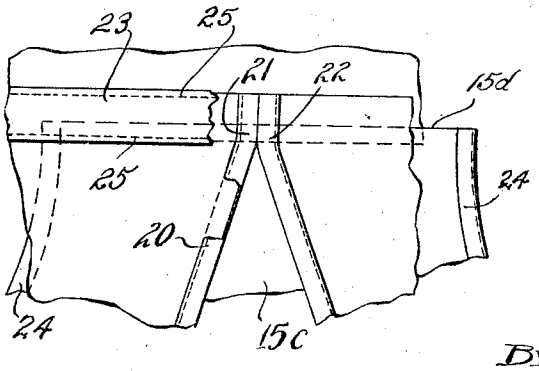


Fig.-5

INVENTOR
Lonie N. Gross,
BY Bair & Macklin,
ATTYS.

Patented Feb. 16, 1926. 1,573,159

UNITED STATES PATENT OFFICE.

LOUIS N. GROSS, OF CLEVELAND HEIGHTS, OHIO.

VENTILATED SUNSHADE.

Application filed May 7, 1923. Serial No. 637,153.

To all whom it may concern:

Be it known that I, LOUIS N. GROSS, a citizen of the United States, residing at Cleveland Heights, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in a Ventilated Sunshade, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates particularly to sun shades or awnings and has for its object the provision of simple means associated with the shade for enabling effective circulation of air through and behind the shade without permitting the passage of sunlight therethrough at an objectionable angle. My invention when embodied for instance in a window awning permits the passage of air through the awning and its entrance into a room through the upper portion of the window whether the shade be in the inclined position usual with window awnings or hanging vertically as a porch protector, it may be mounted and raised and lowered by the usual supporting and operating means.

I effect the characteristics above mentioned by providing a series of openings across the awning and arranging a panel or flap behind each opening, which panel is sufficiently large to prevent the entrance of sunlight at an objectionable angle, but may be readily moved by the air. Moreover, these panels are spaced sufficiently from each other to permit independent movement, and at the same time to permit the entrance of air therebetween for effecting adequate ventilation behind the awning.

The preferred means for carrying out my invention will be set forth in the following description which pertains to the accompanying drawings. The essential features of my invention will be summarized in the claims.

In the drawings, Fig. 1 is a perspective view of a window awning embodying my invention; Fig. 2 is a rear view showing the panels in place; Fig. 3 is a vertical transverse section through the awning shown in Fig. 1; Fig. 4 is a perspective view of an awning embodying my invention when used as a vertically disposed shade; and Fig. 5 is a fragmentary view of the awning adjacent the opening shown in Fig. 4 to indicate the manner in which the openings may be reinforced and in which the panels may be attached to the shade.

Referring to the accompanying drawings by reference numerals, 1 indicates the face of an awning or sun shade having vertically disposed sides 2. This awning has the usual guide brackets 3 and frame 4 which may be raised by hoisting ropes in the customary manner.

To provide a simple and effective means for ventilating the space behind the awning, I have shown a series of openings 10 in one row, and a series of openings 11 in another row. These openings are preferably staggered and are spaced sufficiently apart to permit the passage of air therethrough, and at the same time to provide adequate material between the openings to prevent the awning from being weakened. In the preferred embodiment each opening is narrow at the top and wider at the bottom as illustrated, so as to permit the use of panels which have spaces between them to enable the free passage of air beyond the flaps. By bringing the material together at the top of the opening, the body of the awning is not weakened as would be the case were the openings as wide at the top as at the bottom.

The panels or flaps illustrated comprise fabric shields 15 which are placed behind the openings 10, and are securely affixed at one end thereof to the awning, as by sewing, directly above the opening. Similarly, I provide flaps 16 which are affixed to the awning above the openings 11. Thus each flap hangs vertically and is spaced sufficiently from the adjacent flap to permit the passage of air therebetween. Each flap, however, is larger in area than the associated opening wherefore the entrance of objectionable light rays is prevented.

By the described arrangement air passes freely through the awning while the direct rays of the sun do not. Moreover, when the air within the region of the awning is set in motion, the currents of air flowing through the openings and striking the flaps will be thereby deflected, and if these currents are sufficiently strong the flaps will be caused to vibrate and will thereupon cause the air to be deflected over a wider

region, the result being a thorough dissemination and circulation of the air.

My invention is also well adapted for use on a vertical awning or sun shade as illustrated in Fig. 4, wherein the openings 10^a and 11^a are provided with suitable flaps 15^a and 16^a respectively. The openings preferably are staggered as illustrated, and each flap is independently movable as heretofore explained.

The preferred manner of attaching the flaps to the awning or shade is shown in Fig. 5, wherein the opening is reinforced by a binding, such as a tape 20 which extends around the marginal edges of the openings, the two ends 21 and 22 lying close to each other at the top as shown, and each flap has a binding 24 about its margin. The upper edge of the panel 15^c and its binding are preferably interposed between the overlapping edges of the body portion of the awning as at 15^d, and a transverse binding strip 23 on the outer face of the awning may be employed to fasten the lapped edges to the panel as by stitching 25. The binding strip 23 thus acts as a reinforcing member as well as a covering for the rough edges at the ends of the marginal bindings.

From the foregoing description it will be seen that my invention provides a device which is well adapted for a sun shade, so as to permit the circulation of air through it without admitting objectionable light rays; moreover, the flaps are independently movable and are spaced sufficiently from each other so that air passing through the openings may circulate behind the awning and enter the room or porch shaded by the awning. Moreover, by so perforating the body of the awning, I have provided against sudden gusts of wind tearing it from the building.

The rays of sun beating down upon an ordinary awning heats the air pocketed beneath it, and thus such an awning in front of an open window, acting as a collector of heat, heats the adjacent air within the room, though shielding from the direct rays. I have provided an awning which functions as an ordinary awning in breaking the direct rays of the sun, while in addition I have provided a cooling and ventilating effect by causing the awning to act very much in the same manner as do the leaves on a tree.

I claim:—

1. In a device of the class described, the combination of a fabric shade having a series of separated openings therein, and a series of fabric flaps securely affixed to the shade above the respective openings and depending behind them, said flaps being independently movable and being spaced apart sufficiently to permit the passage of air between adjacent flaps.

2. In combination, an awning having a row of spaced openings therein, of flaps attached to the awning respectively above each opening, each of said flaps having an area larger than the area of the associated opening, said flaps being nearly contiguous but each being so shaped that a passageway is provided between adjacent flaps for the passage of air, whereby free circulation of the air is obtained behind the awning.

3. In combination, an awning having a series of openings therein, each opening being narrower at the top than at the bottom, a flap securely fixed to the awning directly behind each of said openings, said flaps having an area larger than that of the associated openings, and having such shape that the lower portions are in close proximity so as to provide a shield for the rays of the sun passing through the opening, while the upper portions of the flaps are spaced sufficiently apart to provide passageways for the free circulation of air behind the awning.

4. In combination, an awning having a fabric sheet with a plurality of spaced openings arranged in rows, the openings in one row being staggered with relation to those in an adjacent row, and fabric flaps securely fixed at their upper edges to the back of the awning behind the openings, said flaps being independently movable to allow the passage of air between them while providing a shield for the rays of the sun passing through the openings.

5. In combination, an awning having a plurality of spaced openings arranged in rows, the openings in one row being staggered with relation to those in an adjacent row, flaps securely fixed to the awning adjacent the openings, each flap being narrower at the top than at the bottom, and being so spaced as to be independently movable, the bottom portions of the flaps being in close proximity to each other to provide a shield for the rays of the sun passing through the openings while the upper extremities are spaced sufficiently apart to provide a passageway for the free circulation of air behind the awning.

6. In an awning, the combination of overlapping fabric sheets secured together, one of said sheets having an opening through it, and a fabric flap behind the opening, and having its upper edge extending between the overlapping portions of the sheets, both overlapping portions and the flap being stitched together.

7. In combination, an awning having an opening therein, a flap associated with said opening, a reinforcing binding extending around the marginal edges of the opening, such reinforcement having the ends thereof terminating adjacent the top of the opening, the upper edge of said flap being in engagement with the rear side of the awning

adjacent the ends of said reinforcement, and extending between overlapping sections of the awning proper.

8. In combination, an awning having an opening therein, a flap associated with said opening, a reinforcing binding extending around the marginal edges of the opening, said reinforcement having the ends thereof terminating adjacent the top of the opening, the upper edge of said flap being in engagement with the rear side of the awning, and a binding tape on the awning, extending transversely of the openings and overlapping said reinforcing binding.

9. In combination, an awning having an opening therein, a flap associated with said opening, a reinforcing binding extending around the marginal edges of the opening, said reinforcement having the ends thereof terminating adjacent the top of the opening, the upper edge of said flap being in engagement with the rear side of the awning adjacent the ends of said binding and a binding tape on the front face of the awning, extending transversely of the openings and overlapping the binding and the junction of the flaps and awning.

10. In combination, an awning having a series of aligned openings therein, a series of flaps associated with said openings respectively, a reinforcing binding extending around the marginal edges of each flap, each reinforcement having the ends thereof terminating adjacent the top of the opening, a reinforcing binding extending around the marginal edges of each opening, such latter reinforcement having the ends thereof terminating adjacent the top of the opening, the upper edges of said flaps being in engagement with the rear side of the awning and a binding tape on the awning extending transversely of the openings and overlying the junction of the awning, the flaps and the reinforcements.

In testimony whereof, I hereunto affix my signature.

LOUIS N. GROSS.