May 18, 1948. H. R. JENSEN 2,441,819

VENTILATING BODY OR SCREEN

Filed April 4, 1945

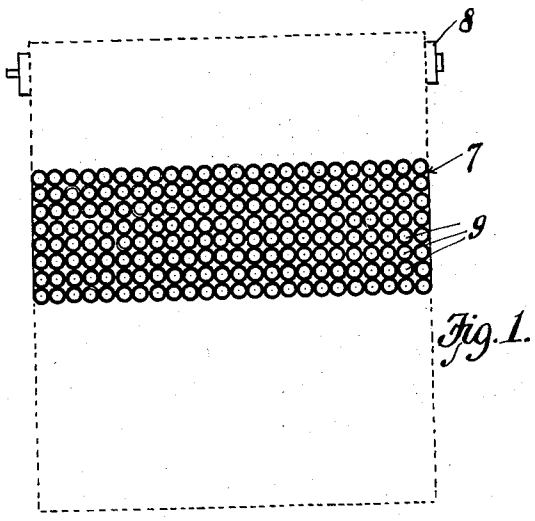


Fig. 1.



Fig. 2.

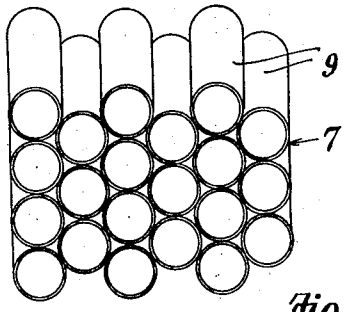


Fig. 3.

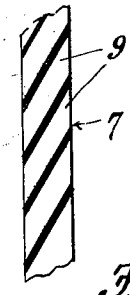


Fig. 4.

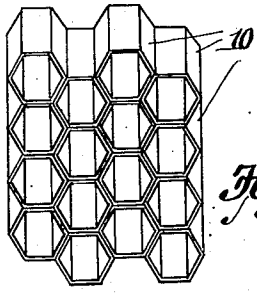


Fig. 5.

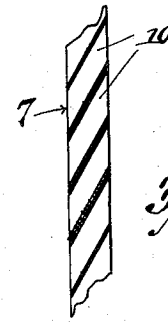


Fig. 6.

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VENTILATING BODY OR SCREEN

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3 Claims. (Cl. 154—46)

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This invention has general reference to a body or screen for the purpose of either entirely excluding or in subduing light, at the same time permitting free circulation of air.

The invention has particular reference to a screen or panel, either flexible or rigid, to be inserted in an opening, such as a window or door, to either wholly exclude or to subdue light while at the same time to permit free passage of air through such body or panel.

The purpose of the invention, generally, is to provide such a panel or body to be placed in a window or door to darken the room either entirely or partly, to facilitate the showing of motion pictures or lantern slides properly but without interfering with ventilation. In other instances, the screen or panel may be constructed in such manner as to partially subdue light or to obviate glare, such, for instance, as may be desirable in hospitals or sick rooms, while at the same time to permit free circulation of air through the body or panel.

With these objects in view, together with others which will appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts, all as will be described more fully hereinafter, illustrated in the drawing, and particularly pointed out in the claims.

In the drawing:

Fig. 1 is a front elevation showing a portion of a screen or panel embodying the invention, the view illustrating a screen of flexible nature mounted upon a roller,

Fig. 2 is a transverse sectional view taken through the screen shown in Fig. 1,

Fig. 3 is an enlarged fragmentary face view of a panel embodying the invention and illustrating one way in which the cells may be assembled,

Fig. 4 is a transverse sectional view through the device shown in Fig. 3,

Fig. 5 is a view similar to Fig. 3 and disclosing a modified form of cell, and

Fig. 6 is a transverse sectional view through the device disclosed by Fig. 5.

For the accomplishment of the purposes generally set forth, the screen or panel may be of rigid structure with predetermined dimensions, or may be made in a flexible sheet so as to be capable of being either folded or rolled. In whatever form, the panel comprehends generally a body of predetermined transverse dimension or thickness, having cells or openings passing therethrough and in sufficient number to permit free passage of air through the panel. These cells or

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openings are disposed at such angle to the true transverse dimension of the panel that the ends of the openings on one face of the panel are out of true alignment or are offset with respect to the opposite ends of the same openings. By so disposing the cells, no interference to the free passage of air through the panel is offered, at the same time the offsetting or misalignment of the ends of the cells precludes the passage of light rays therethrough.

The material of which the panel or screen is made may vary. The panel may be made of a semi-rigid or flexible body with openings formed therein in the manner specified, or the panel may be constructed of a series of tubes or cell-like bodies secured together in any desired manner to constitute a unitary structure. The body or the cells which comprise the same may be made of rubber, of plastic material, waterproof fabric or of synthetic material. In instances where the screen is designed to exclude light entirely, the cells will be of an opaque material so as to absorb light rays, while in instances where a subdued light only is desirable, the cells or the body may be of a semi-transparent material. In the latter instance, a subdued light will be permitted to pass through the body, at the same time all glare or the possibility thereof is eliminated.

In Figs. 1 and 2 there is illustrated a panel or body 7 of flexible construction, one end of the panel being secured to a conventional form of roller represented at 8 so that it may be mounted and operated in much the same manner as the well known window shade. In this form of the invention the cells comprise a series of tubes 9 secured together in the manner disclosed so as to form a composite body, the tubes being assembled with their axes parallel and at such angle with respect to the true or minimum transverse dimension of the panel that the ends of the cells or tubes at the front of the panel are entirely out of alignment or offset with respect to the opposite ends of the same cells or tubes. It is obvious, therefore, that when the screen is disposed in a window or door opening, free passage of air through the many cells will be permitted, while at the same time light rays will be broken up and absorbed by the walls of the cells and no direct rays are capable of passing through the panel. In this form of the invention, as has been heretofore stated, the panel will be made up of tubes or cellular structures of flexible nature so that these cells will collapse to permit winding upon the roller 8.

The structure shown in Figs. 3 and 4 discloses

more particularly the manner in which these tube-like bodies are formed and assembled to accomplish the results above stated.

The modified form of the invention shown in Figs. 5 and 6 discloses the same inventive idea carried out with tubular bodies or cells 10 of more or less angular transverse shape. In this instance, the members 10 constituting the cells are of hexagonal cross section, permitting of ready and secure assemblage in the construction of the composite screen.

In any form of the invention, the angularity or arrangement of the openings, cells or tubes will be such that the walls thereof will extend across the true transverse axis of the openings on opposite faces of the screen or panel so that these walls themselves intercept light rays entering the openings at one side of the panel and prevent them from passing to the openings at the opposite side of the panel. At the same time, free access of air through the cells is at all times permitted.

From the foregoing, it is apparent that a screen or panel constructed in this manner will accomplish the objects sought, permitting free passage of air through the panel while at the same time either wholly excluding, or subduing, the passage of light therethrough.

I claim:

1. A ventilating screen comprising a panel formed of flexible material and having therein a plurality of openings extending from the front to the rear faces thereof and disposed in parallelism, the angles of the axes of said openings with respect to the true transverse dimension of said panel being such that the ends of the openings on one face of the panel are out of true alignment with the opposite ends of the same openings.

2. A ventilating screen comprising a plurality of tubes straight throughout their lengths open at their ends and secured together side to side to form a panel, said tubes formed of flexible material to permit collapsing of the same, the said tubes disposed at an angle to the true transverse dimension of the panel, whereby the ends of said tubes at opposite sides of said panel are out of alignment with each other.

3. A ventilating screen comprising a thin elongated panel formed of a plurality of open ended independent tubular members secured together in abutting parallel relationship throughout their lengths, the angles of the axes of said openings with respect to the true transverse dimension of said panel being such that the ends of the openings on one face of the panel are out of true alignment with the opposite ends of the same openings.

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