

March 24, 1964

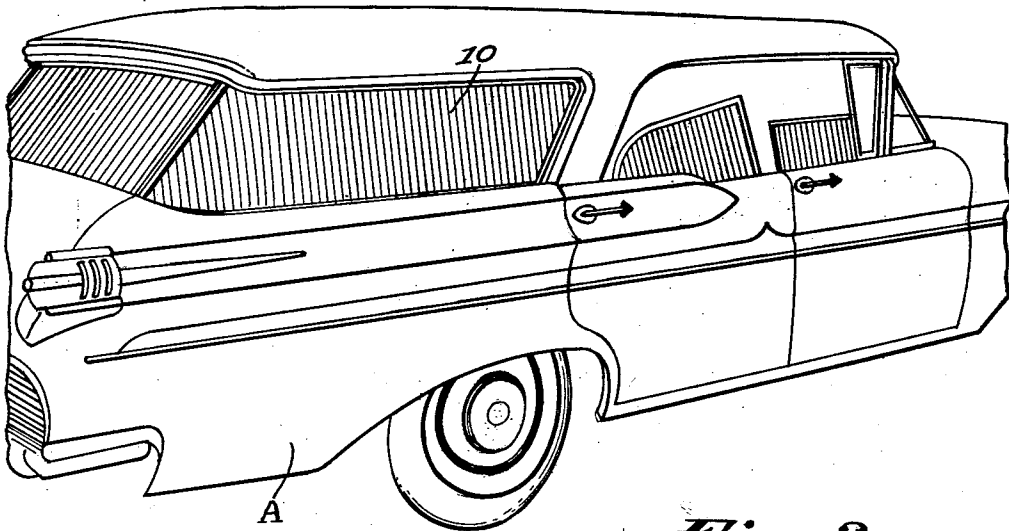
V. F. TONNON  
FRAMED SHADE SCREENS FOR WINDOWS AND VARIOUS  
MEANS FOR ATTACHING SAME

3,126,052

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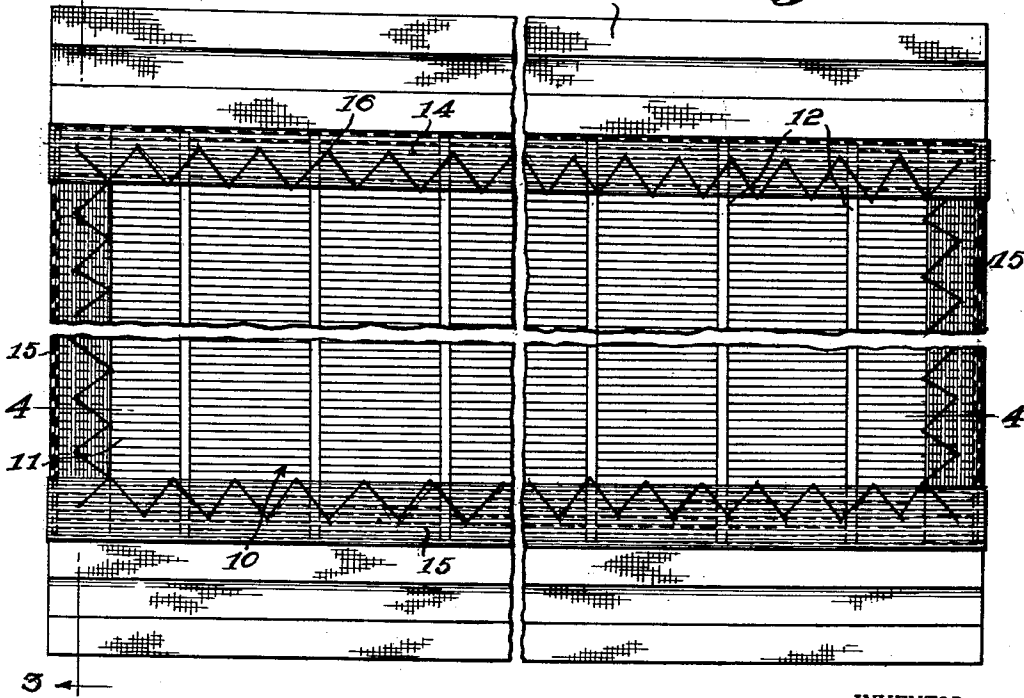
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*Fig. 1.*



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19<sup>d</sup> *Fig. 2.*



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Fig. 3.

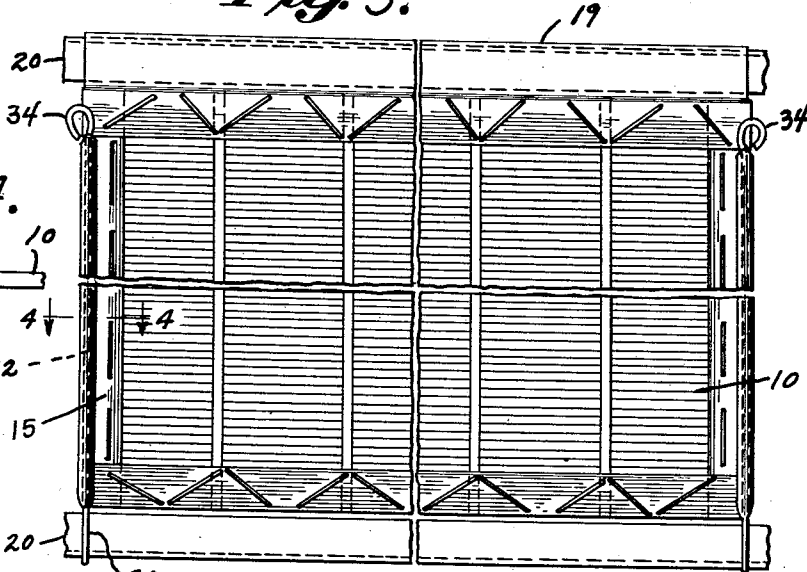


Fig. 4.

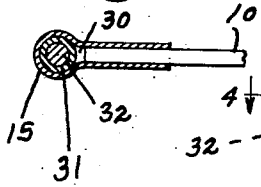


Fig. 6.

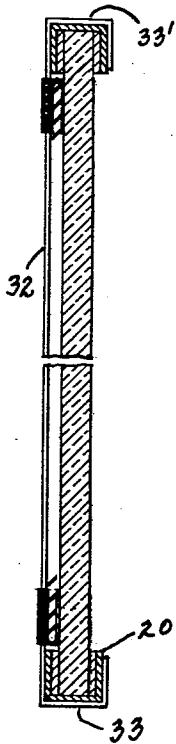
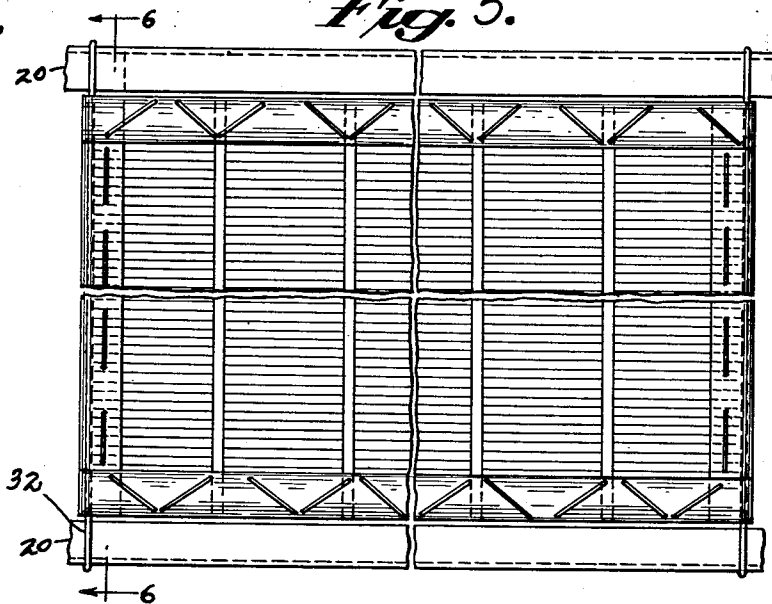


Fig. 5.



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**FRAMED SHADE SCREENS FOR WINDOWS AND VARIOUS MEANS FOR ATTACHING SAME**

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1 Claim. (Cl. 160—90)

This invention relates to shade screening and is directed particularly to the application thereof to windows of vehicles, buildings, boats or any other application where it is desired to screen out the rays of the sun.

Shade screen comprises generally a plurality of vertically spaced angularly disposed horizontal slats and spaced vertical grooves unitary with the slats which impart rigidity to the screen. Such screening is ordinarily used in a separate wooden or metal frame slidably or pivotally secured to the building outwardly of the window to provide the dual function of shielding the interior of the building from the sun's rays and barring entry of insects when the window is open.

With the wide spread use of air conditioning in homes, office buildings and automobiles, it is naturally undesirable to open windows in hot weather if peak operating efficiency of the air conditioning unit is to be obtained. The original primary purpose of window screens, that is to exclude insects has thus become of negligible importance in cases where air conditioning is used.

In the case of automobiles, there are various types of shade devices on the market which are attached to the door frame rather than the window itself, and such devices are not wholly satisfactory for various reasons. For example, if the window has to be lowered, it is necessary to either lower the screen independently of the window if the screen is of the vertically sliding type or remove the screen completely if it is the type attached to the window frame by clamps, snap fasteners, springs or the like. When existing shade screen devices are applied to fixed window panes, as are found, for example, in the rear side windows in station wagons, they are commonly applied to the use of snap fasteners which requires drilling of holes in the molding around the window opening. This involves installation costs and even then is not wholly satisfactory since the screens are seldom held taut so as not to rattle and permits the screen to be easily detached by a child.

Accordingly, it is a primary object of the present invention to provide a novel means of attaching shade type screening to the inside of a window in a vehicle or building whereby the screen will move with the window when the latter is open or shut and will still provide the desired effect of shielding the sun's rays from the interior of the vehicle or building. The window can normally be lowered for service at drive-ins or for hand signals. Also, there is provided an additional safety factor in the event of flying glass.

Another object of the invention is to provide shade type screening which may be applied to windows of various shapes and sizes and may be easily removed and re-applied when necessary, for example, when it is desired to wash the inside of the windows.

Another object of the invention is to provide reinforcing means to impart rigidity to the screen so as to prevent the same from rattling particularly when it is applied to windows of large area.

Another object is to provide a shade screen which can easily be installed by the average person and thus eliminate costly labor charges which would be incurred with other types of installations.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the invention consists in the novel

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construction, combination, and arrangement of parts, hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

FIGURE 1 is a perspective view of an automobile broken away at each end thereof and disclosing the application thereto of shade screens constructed in accordance with the present invention.

FIGURE 2 is an outer plan view of a shade screen on a full scale dimension and which is broken away both horizontally and vertically, and while for purpose of illustration it is shown as of rectangular form, such screen may be of different shapes as occasion for use thereof may demand, such as for automobile windows.

FIGURE 3 is a plan view of a shade screen partially broken away, showing a modified attaching means.

FIGURE 4 is a horizontal section taken on the line 4—4 of FIGURE 3.

FIGURE 5 is a plan view of a shade screen partially broken away, showing a further modified attaching means.

FIGURE 6 is a vertical section taken on the line 6—6 of FIGURE 5.

The screening 10 as is more clearly shown in FIGURE 2, is not of itself a novel feature of the present invention, the same being commonly known as shade screening. Such screening comprises a plurality of vertically spaced horizontal slats 11 and spaced vertical grooves 12 unitary with the slats 11 whereby the slats are divided into groups thereof as is clearly shown in FIGURE 2. It is to be observed that slat connecting grooves 12 are of less thickness than the width of the slats and same are concave on each side thereof, a feature of advantage in the present invention as will later appear. It is understood that the shade screen may be made from metals other than aluminum or of plastic or cloth if desirable.

In accordance with the present invention, the margin of the screening 10 which will of course be of a configuration to fit windows of varying contour as is found in automobiles, is covered by a plastic coated waterproof cloth adhesive tape 14 and is known commercially as "Tucktape"; however, fabrics or other type tape may be used in manufacturing, if desired.

Such tape, however, has a novel application to the screening 10 above referred to, as well as to the channel members of doors or windows. The tape or other material applied around the channels shown in FIGURES 3, 5, and 6 can also be applied between the glass and said channels.

As is indicated in FIGURES 2 and 3, the tape 14 includes a length 15 thereof which is folded over each side edge of the screening 10 and adhered thereto, and a length of tape 16 is folded over the upper and lower edges of the screening 10 and adhered thereto with opposite ends of tape 16 lapping over tape 15 as is indicated in FIGURE 2.

As is indicated in FIGURE 2, the tapes 15 and 16 are preferably zig-zag stitched to the margins of the screening 10 by means of thread. If desired, staples could be used in lieu of thread.

FIGURES 3, 4, 5, and 6 show a screen having a marginal frame of adhesive atpe 15 as heretofore described; however, the tape along the side edges is provided with a longitudinally extending pocket or channel 30, having a cloth or other non-tacky material 31 secured to its inner face. Each of the channels 30 is adapted to receive a rod 32 of approximately 1/16" diameter which has its lower portion bent into a substantially U-shaped hook 33 of slightly greater width than the width of the lower window channel frame 20. The upper portion of the rod

32 is initially left straight so that it may be inserted through channel 30.

A shade screen utilizing this type of attaching means is installed on the inside of an automobile window in the following manner: With the rod 32 held so that the hook 33 is parallel to the window pane, the hook is lowered between the latter and the inside of the door panel, rotated 90° to position the hook beneath the lower window frame 20, and then the rod is pulled upwardly until the hook tightly engages said frame 20 as shown in the bottom portion of FIGURE 6. Depending upon the construction of the particular automobile door frame and window, the free upper portion of the rods 32 may either be cut off and bent back upon themselves as shown in FIGURE 3 to form an eye 34, or they may be brought up and over the top window channel frame 20 as shown in FIGURE 6 to form an upper hook 33'. In the type of installation shown in FIGURE 3, the length of adhesive tape 19 previously referred to is pressed into contact with the top window channel frame. Where the rods 32 are bent over at both top and bottom as shown in FIGURE 5, the tape 19 may be dispensed with since a secure rattle-free fit is obtained merely by use of the rods.

It is understood that the illustrations contained in the drawings and described herein are illustrative in nature and not limiting the scope of the invention as to the type of material employed or its size or shape.

I claim:

A shade screen for attachment to vehicle windows which are adapted to be raised and lowered into a door panel and are provided with a channel member receiv-

ing the window pane, said screen comprising a foraminous louvered member, a frame secured to the edges of said member, said frame having a longitudinally extending passage within each of its side edges, means for attaching the screen to the window, said means comprising a rod rotatably disposed within each of said passages, the lower end of each rod bent to provide a hook disposed below the lower edge of said foraminous louvered member, said hook adapted to be disposed parallel to said pane when the rod is lowered into said panel and rotatable 90° to engage the lower edge of said window pane channel, means at the upper end of each rod to prevent unintentional withdrawal thereof from said passages, and adhesive means secured to the top edge of said frame and adapted to be removably secured to the top edge of said window pane channel member.

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