March 3, 1964 E. J. NADOSY 3,122,954

VENETIAN BLIND SLATS

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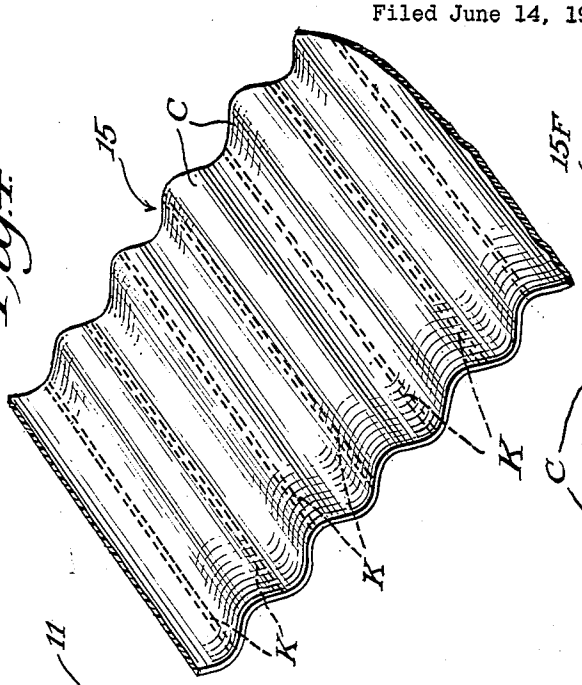


Fig. 4.

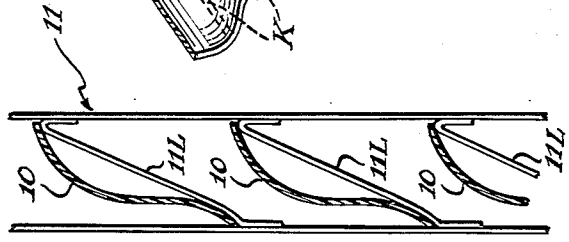


Fig. 3.

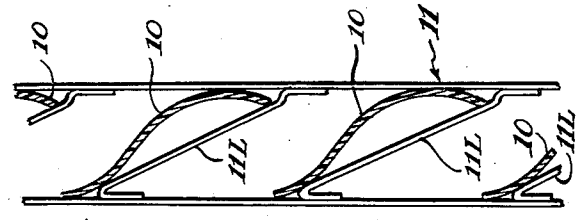


Fig. 2.

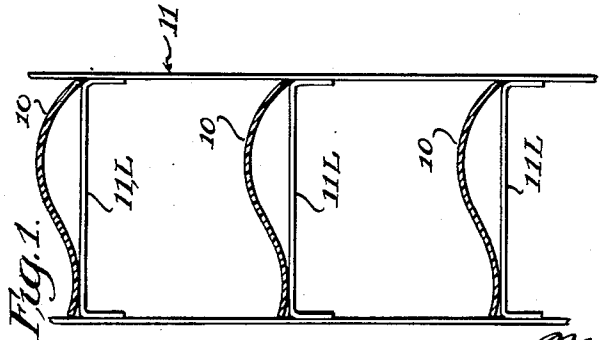


Fig. 1.

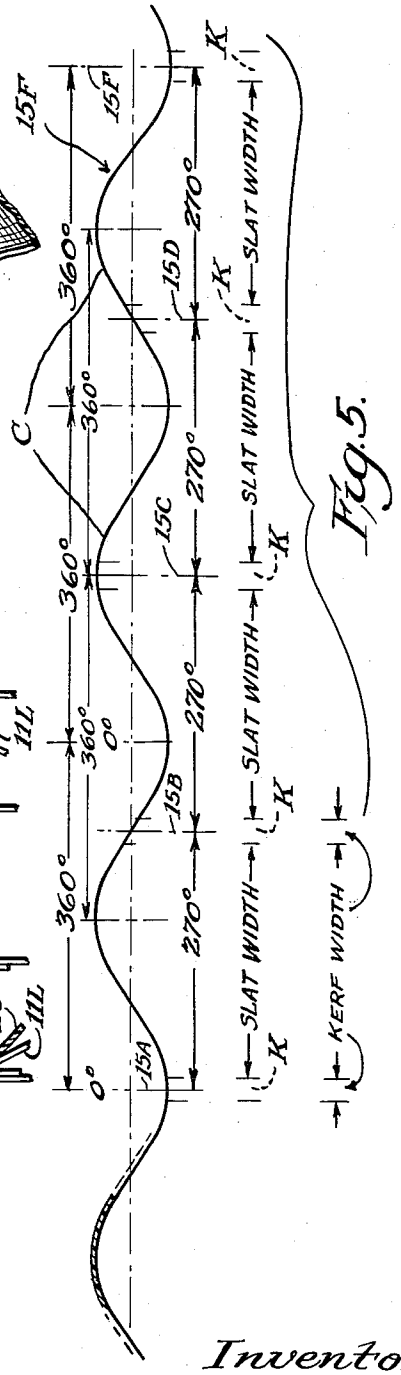


Fig. 5.

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VENETIAN BLIND SLATS

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2 Claims. (Cl. 83—42)

This invention relates to Venetian blinds and particularly to slats used therein and the production of such slats.

Venetian blind slats have, of course, been made of many different materials and in many different finishes, but in all of the prior structures, the production of the slat has required the use of elaborate and expensive manufacturing equipment. In view of this it is the primary object of this invention to simplify the production of Venetian blind slats and to do this by enabling a readily available commercial material to be used and converted into slats merely by sawing of this material.

Other and related objects of the invention are to enable attractive translucent Venetian blind slats to be produced in a simple and economical manner; to produce Venetian blind slats of a novel cross sectional form; to produce such slats from a strong translucent material so that novel patterns of light transmission and reflection are obtained; and to enable light and economical sheet material to be readily converted into Venetian blind slats.

Other and further objects of the present invention will be apparent from the following description and claims, and are illustrated in the accompanying drawings, which, by way of illustration, show a preferred embodiment of the present invention and the principles thereof, and what is now considered to be the best mode in which to apply these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the invention.

In the drawing:

FIG. 1 is a fragmentary vertical sectional view of a Venetian blind embodying slats made under this invention;

FIGS. 2 and 3 are views similar to FIG. 1 and showing the blind adjusted to its opposite extremes of slat tilting adjustment;

FIG. 4 is a fragmentary perspective view showing a sheet of reinforced translucent plastic material of corrugated form and indicating by dotted lines the general manner in which such a sheet may be divided to produce the novel Venetian blind slats shown in FIGS. 1 to 3; and

FIG. 5 is a schematic view showing further details of the manner in which the sheet of FIG. 4 is divided.

For purposes of disclosure the invention is herein illustrated as embodied in Venetian blind slats **10** which have a reversely curved cross sectional form to provide strength and novel light transmission and reflection patterns. In FIGS. 1 to 3 a plurality of slats **10** are shown in various positions of adjustment as they are supported on the ladders **11L** of the conventional ladder tapes **11** of a Venetian blind, and by reason of the reversely curved cross sectional form of the slats **10** and the fact that such reverse curve is not symmetrical with respect to the longitudinal center line of the slats, the slats **10** of this invention produce novel patterns of light transmission and reflection, and since these slats are produced from colored translucent material, further characteristics of novelty and attractiveness are attained in the completed Venetian blind.

Under and in accordance with this invention the slats **10** are produced from a readily available corrugated material such as the corrugated plastic sheet **15** shown in FIG. 4, and by separating or cutting the sheet

15, as will be described, along lines parallel to the corrugations C of the sheet **15** is divided into a plurality of slats **10** of identical cross sectional form. The sheet **15** is a commercially available product made from fiber glass reinforced translucent plastic material which is available in several different thicknesses and a wide variety of colors. One widely available brand of such material is sold under the trademark "Filon" by Filon Plastic Corp. of Hawthorne, California. This sheet material is relatively flexible in one direction so that it is often sold in rolls, and it is stocked throughout the country in lumber yards and the like. Such material is made by several companies according to relatively standardized specifications as to weight, spacing of corrugations, and depth of corrugations.

The corrugated material above described is now available with its corrugations having a nominal spacing of 2½ inches and a nominal depth of 9/16 inch, and in another form where these dimensions are nominally 1¼ inch and ¼ inch. Sheets having either of these sets of dimensions may be used in producing the Venetian blind slats **10** under the present invention, it being kept in mind that the sheets having differently dimensioned corrugations will necessarily provide slats **10** of different widths.

Thus it may be pointed out that by far the largest proportion of Venetian blind supplies such as tilt bars, toe rails and ladder tapes are dimensioned for use with slats having a width of substantially 1¾ to 1⅞ inches, and it has been discovered that corrugated plastic sheets where the corrugations have nominal dimensions of 2½ inches by 9/16 inch may be employed to produce Venetian blind slats **10** having this standardized dimension, or where desired, such corrugated material may be used to produce even under slats up to about two inches in width. Of particular importance in this respect is the fact that normal variations in the dimensions of the corrugations in a particular run or supply of the corrugated sheets **15** have but little and inconsequential effect on slats **10** and their production, as will be explained.

As illustrated in FIG. 4, and as shown diagrammatically in FIG. 5, the sheet **15** has corrugations C that are of substantially sine wave form, and to facilitate detailed description, each corrugation C has been indicated as extending through a distance of 360° substantially in accordance with the usual mathematical description of sine wave form but in order to coordinate the slat forming steps of my method with this illustration, the repetitive cycle of the curve has been located at the points of maximum downward amplitude of the wave form, rather than at the points of zero amplitude.

In producing slats **10** of identical cross sectional form from the corrugated sheet **15**, it will be observed in FIG. 5 that each slat **10** comprises slightly less than 270° of the 360° width of a corrugation C so that four slats **10** of identical width and cross section are produced from three corrugations C, the sheet **15** being divided parallel to the corrugations C by sawing along kerfs K that are indicated in each instance by spaced dotted lines in FIG. 4. It has been pointed out that some variation is experienced in the nominal spacing of the corrugations C, and in FIG. 5 these corrugations C are shown as having a spacing of $22\frac{1}{32}$ inches which is somewhat more than the 2½ inch spacing that is set in the specifications under which such material is made and sold.

The somewhat larger dimension shown in FIG. 5 represents a variation that has been encountered in random purchases of material intended to have a 2½ inch spacing of its corrugations C, and it is found that such variations in every instance involve an increase rather than a decrease in the nominally specified spacing. Such variations, however, have no burdensome effect on the produc-

tion of slats **10** of uniform width and cross sectional form since compensation for such variations may be made merely by using a saw kerf **10** of a different width determined by the dimensional variation encountered in a particular lot or supply of sheets **15**.

Under the present invention, each slat **10** is formed so as to extend substantially from a point of maximum amplitude of the sine curve through an adjacent point of zero amplitude and through the next adjacent point of maximum amplitude substantially to the next point of zero amplitude, the width of the final slat being equal to 270° of the sine wave curve less substantially the width of the saw kerf K. Thus, in FIG. 5, the division lines between the several 270° portions are designated as **15**A to **15**F, and with the corrugations C having a spacing of $22\frac{1}{32}$ inches, a saw kerf K of $\frac{15}{64}$ inch width is cut in a centered relation along each of the division lines **15**A to **15**F to produce four slats **10** of identical cross sectional form and of a uniform 1¾ inch width.

The principles above set forth may of course be applied to corrugated sheets of other dimensions. Thus as applied to sheets which have the corrugations spaced nominally at 1¼ inches, the present method may be employed to produce slats embodying the invention and have a width of slightly under one inch.

The slats **10** that are thus produced are light in weight, and having the reverse curve cross section possess adequate resistance to bending. Moreover, the sheets **15** from which the slats **10** are made are available in many attractive colors and with many diffeernt coefficients of light and heat transmission so that under the present invention Venetian blind slats may be provided to satisfy many different requirements that cannot be satisfied with conventional slats.

From the foregoing description it will be apparent that the present invention provides a Venetian blind slat of novel form and construction and that the invention enables such slats to be produced from materials that are readily available in most locations.

It will also be apparent that this invention enables

Venetian blind slats to be produced from available materials that are made and stocked in different colors and which provide for different heat and light transmission.

Thus, while a preferred embodiment of the invention has been illustrated herein, it is to be understood that changes and variations may be made by those skilled in the art without departing from the spirit and scope of the appending claims.

I claim:

1. The method of producing a plurality of Venetian blind slats of identical cross sectional form and width from a sheet of reinforced plastic that is corrugated to a substantially sine wave curve in cross section which includes the steps of cutting the sheet parallel to the corrugations along a first line of severance centered on a maximum amplitude point of the sine wave curve, feeding the sheet perpendicular to said line of severance through a distance equal substantially to 270° with respect to the sine wave curve of the corrugations, and cutting said sheet along a second line of severance parallel to and spaced from the first line of severance in substantially 270° with respect to the sine wave curve of said corrugations.

2. The method as defined in claim 1 wherein compensation for variations in the spacing of the corrugations is accomplished by cutting away different widths of the material in the cutting operation along said lines of severance.

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