Nov. 18, 1941. S. J. JOHNSON 2,263,540

VENETIAN BLIND SLAT

Filed July 15, 1940

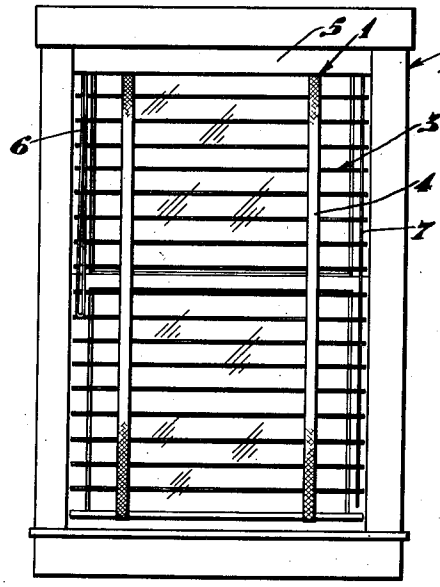


Fig. 1

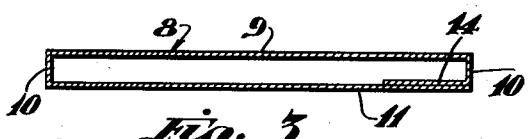


Fig. 3

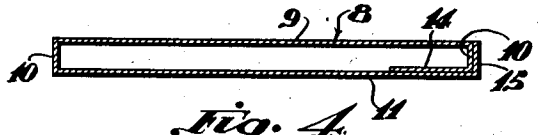


Fig. 4

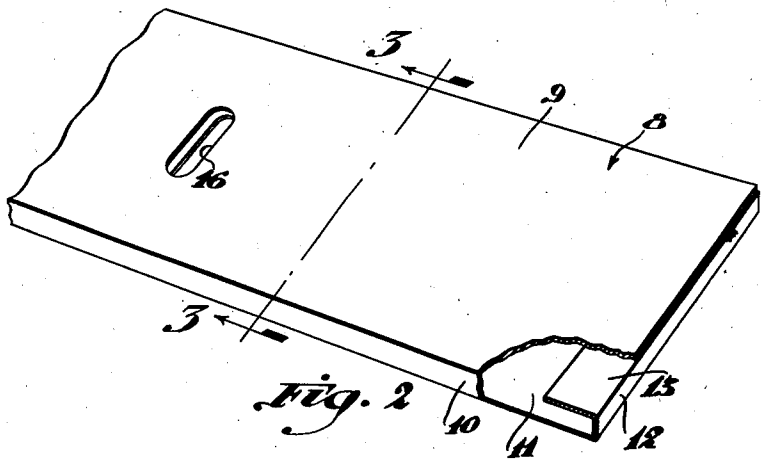


Fig. 2

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VENETIAN BLIND SLAT

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2 Claims. (Cl. 156—17)

This invention relates to Venetian blinds and particularly to the construction of the slats which form component parts of them. The slats of the invention find particular utility in blinds of the cheaper type including particularly those in which heavy paper, cardboard, cloth or composition materials are substituted for the conventional wood or light weight metal.

Since the comparatively recent popularity of Venetian blinds, much thought and attention has been directed to the problem of simplifying the construction and reducing the cost of the materials used in order to enable manufacturers to put on the market Venetian blinds which may be sold at a price sufficiently low to permit them to go into really wide commercial use. Since the slats represent the principal material item involved in Venetian blind construction, many efforts have been made to find materials adapted to slat construction which might provide a saving in cost and still make an acceptable substitute. Heavy paperboard, cloth reinforced with wire or metal strips and composition materials are only a few of the expedients that have been suggested. It has been a very difficult problem to select a material and construction sufficiently cheap and simple to effect substantial savings in the total blind cost, but still sufficiently strong and rigid to provide a satisfactory commercial structure. In this respect, the principal problem has been to provide a slat of a light inexpensive material configurated so that the slat is of good appearance and easy to clean, yet sufficiently rigid so as not to warp and sag in its longitudinal direction when it is mounted and supported in the usual manner in the blind.

The principal object of the present invention, therefore, has been to provide a Venetian blind slat constructed of very inexpensive material, such as paperboard, and at the same time, to provide a slat which is satisfactory for commercial purposes, that is, durable, easy to clean, and easy to manufacture.

Another object of the invention has been to provide a slat of light weight fibrous material reinforced and strengthened in such a way that warping and sagging are avoided.

Another object has been to provide an effective slat of cheap, light weight material constructed so as to give a neat and pleasing appearance to the completed blind in which the slats are utilized.

Other and further objects and advantages will be apparent from the following detailed description of a typical embodiment when considered in conjunction with the drawing, in which:

Figure 1 is a front elevation of a window embrasure with a Venetian blind positioned therein. The blind is of a conventional type but utilizes the improved slats of the invention.

Figure 2 is a perspective view of a portion of a slat partially broken away to show details of the end construction.

Figure 3 is a cross section along the line 3—3, Figure 2.

Figure 4 is a similar cross section, showing a modified form of construction.

In the drawing, Figure 1 shows a blind 1 comprised of slats of the type of the present invention, suspended in a window frame 2. The slats are designated generally at 3, the tapes at 4, the upper rail of the blind at 5, the tilter cord at 6 and the pull cord at 7. The various elements just enumerated are all conventional in Venetian blind construction.

The particular slat construction to which the invention is directed is best illustrated in Figure 2 which shows a slat 8 formed from a single sheet of flat fibrous material, such as paperboard or the like, folded to provide a top wall 9, side walls 10, a bottom wall 11, and an end wall 12 formed from an extension of the bottom wall. This extension includes a flap 13 adapted to be folded inwardly and adhesively secured to the inner surface of the top wall 9. A slot through which a cord may be inserted is designated at 16.

The closure for the end of the slat, comprising the wall portion 12 and the flap portion 13, may be omitted if desirable, to lessen the cost of production; though it will be understood that the endwise wall 12 improves the appearance of the structure and also stiffens the slat transversely in the same manner that the side walls 10 stiffen the slat longitudinally.

Figure 3 illustrates the construction and manner of fabrication of the side walls. The flap 14 formed from an extension of the side wall 10 is horizontally folded and adhesively secured to the upper surface of the bottom wall.

In Figure 4 there is added to the construction of Figure 3 a second flap 15 formed from an upward extension of the bottom wall 11. This flap is adhesively secured to the side wall 10 on the outer surface of this wall so that the side wall 10 now acts as a reinforcing member for the vertical flap 15 which becomes the true side wall. In this modification the strength of the side wall is materially increased and additional lengthwise rigidity is imparted to the entire slat.

It will be apparent from the foregoing description of the preferred structure of the invention that Venetian blind slats constructed in this manner are appreciably stronger than slats formed from a single sheet of paperboard or a plurality of sheets secured together to provide a laminated structure. The side walls 10 add appreciably to the rigidity of the slat and are very effective in preventing warping which is the most serious objection to slats constructed from one or more thicknesses of light weight material. For a Venetian blind to present a neat and pleasing appearance it is practically essential that the slats remain at all times exactly parallel to one another and, if even one or two of them are warped, the appearance of the entire blind is seriously impaired. The tendency to warping is, of course, accentuated by the fact that the blind is frequently exposed to the weather when the window is open.

It has been found in practice that the slats of the invention maintain their contour and rigidity unusually well provided the material used is of sufficiently heavy weight. However, a slight collapsing of one or two slats does not materially affect the appearance of the entire blind, since their straightness is not impaired.

The end wall construction greatly increases the rigidity of the slats and adds a neat and finished appearance to the construction. When properly fabricated the slats of the invention closely resemble a good grade of wood slats and this illusion may be increased by painting or other means of finishing.

In the manufacture of the present slat units, it is preferable to start with paperboard material of suitable thickness which has been coated on one side or both with an appropriate coating composition, for instance, a suitably pigmented paint or lacquer. Such material, in strip form, is scored longitudinally to delineate the respective wall portions of the flap. The strip is then bent along the scoring lines and adhesive is applied to the closure flap portions, after which the parts are brought together in final folded form. As an alternative method of procedure, an uncoated paperboard material may be fabricated and folded in the manner just described, and this structure then wrapped with a thinner paper having decorative features. The paper wrapper may be painted or coated either before it is applied, or coating may be applied to the finished slat after it is wrapped. Either of these methods of fabrication of the structure contemplates the formation of a continuous strip which subsequently can be severed into slats of predetermined length. However, the slats also may be made by wrapping predetermined lengths one after another about a mandrel of the desired cross sectional shape.

The construction is obviously a simple one and can be performed entirely by machinery or partly by machine and partly by hand. The total cost of manufacture is greatly below that of slats constructed in a conventional way from conventional materials, such as wood or the like.

Having fully described my invention I desire to be limited only by the following claims:

1. A slat for a Venetian blind, comprising a length of paper material, said material being of such thickness and flexibility that it maintains itself against sagging in the transverse direction, but of insufficient stiffness to resist sagging along its length in the absence of other supporting means, said length of material being formed to provide spaced flat upper and lower walls integrally joined by side walls and end walls, thus affording a relatively thin, flat, rectangular structure having considerable rigidity in the longitudinal direction and capable of resisting normal collapsing of the upper and lower walls upon each other by virtue of the side walls and end walls, whereby the slat remains fairly straight and rigid when resting in the supporting structure of a Venetian blind.

2. A slat for a Venetian blind, comprising a length of paper material capable of remaining fairly stiff and straight in the transverse direction, but not in the longitudinal direction without added supporting means, said sheet of paper material providing spaced flat upper and lower walls, side walls and end walls, said upper and lower walls being relatively close together so that they form a relatively thin, rectangular structure, said structure stiffened longitudinally by the provision of the side walls and, the side walls and end walls preventing collapse of the top and bottom walls one upon the other, whereby the structure has considerable stiffness and maintains its shape without extraneous means when supported in the structure of a Venetian blind.

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