July 21, 1942. W. D. CLARK, JR 2,290,634

VENETIAN BLIND LADDER TAPE

Filed Feb. 24, 1941

FIG. 1.

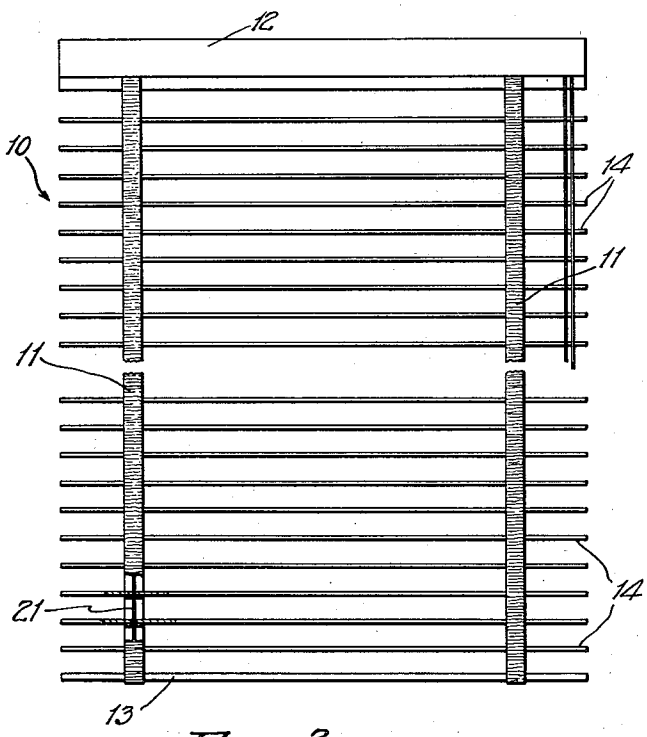


FIG. 2.

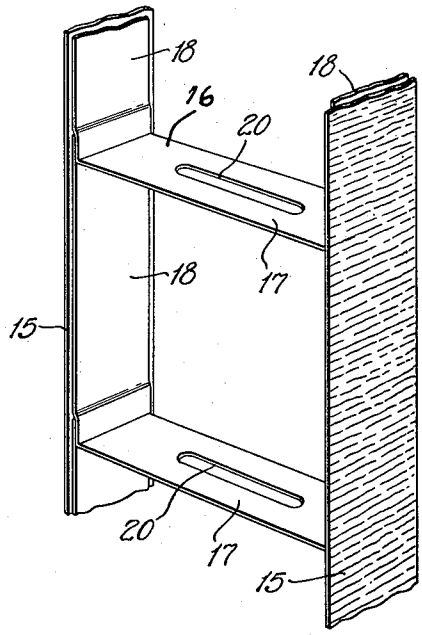


FIG. 3.

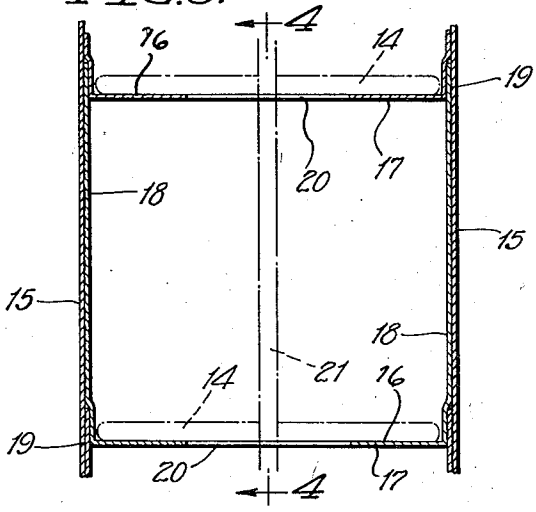


FIG. 4.

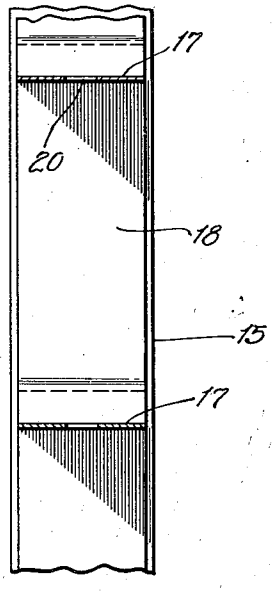
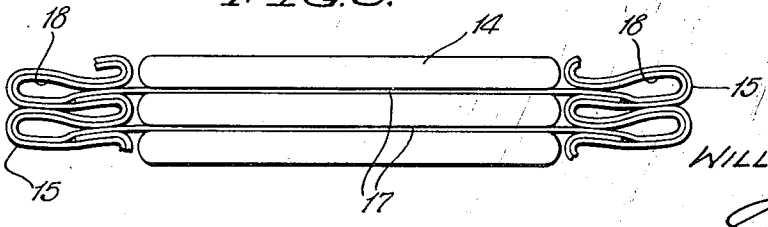


FIG. 5.



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WITNESS:

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VENETIAN BLIND LADDER TAPE

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6 Claims. (Cl. 156—17)

This invention relates to improvements in ladder tapes for Venetian blinds.

The main object of the invention resides in a Venetian blind ladder tape constructed of paper in lieu of the conventional woven fabric tapes heretofore exclusively used for supporting the slats of the blind.

Another feature of the invention is to provide a Venetian blind ladder tape made of paper which is sufficiently strong to support the weight of the slats, and by reason of the inherent flexability of the paper, uniform folding of the suspension tapes is obtained without necessitating scoring of the same.

A further feature of the invention is the provision of a Venetian blind ladder tape made entirely of paper in which the vertical paper suspension strips are reinforced by the paper ladder or cross strips which are adhesively secured to the suspension strips at the inner sides thereof.

A still further feature of the invention is to provide a simple and inexpensive Venetian blind ladder tape of paper which is comparable in appearance to the more expensive woven fabric ladder tapes, and which may be made in different color paper to match the color of the slats or be of an artistic contrasting color from that of the slats.

Other novel features of the invention will become apparent as the following specification is read in conjunction with the accompanying drawing, in which,

Figure 1 is a front elevational view of a conventional Venetian blind embodying the improved paper ladder tapes, part of one tape being broken away in section.

Figure 2 is a fragmentary sectional perspective view of the paper ladder tape.

Figure 3 is a detail vertical transverse sectional view through the paper ladder tape, the slats and hoisting cords being illustrated in dot and dash lines.

Figure 4 is a vertical sectional view on the line 4—4 of Figure 3.

Figure 5 is a detail side elevational view illustrating the manner in which the tapes evenly fold when the blind is in raised position.

Referring to the drawing by reference characters, the numeral 10 designates a Venetian blind including my improved ladder tapes 11—11. The upper ends of the ladder tapes are connected to a tilting mechanism enclosed within a head rail 12 while the lower ends are connected to a bottom rail 13, the ladder tapes 11—11 supporting slats 14 intermediate the head rail 12 and the bottom rail 13.

Each of the ladder tapes 11 comprises a pair of opposed paper suspension strips 15—15. Each strip 15 is preferably constructed of crepe paper in which the creping extends transversely of the strips, whereby the strips may flex or bend transversely without fear of cracking, there being a certain resiliency in the crepe paper to enable easy flexing for reasons to be hereinafter appreciated. I have also discovered that crepe paper of the proper texture is more suitable than flat paper, although manila, craft and other types of paper may be used as the suspension strips if so desired.

Connecting the inner sides of the suspension strips 15—15 at equal spaced distances therealong, are flat supporting elements 16. Each flat supporting element 16 is constructed of paper which may be of a lighter texture than the paper used for the suspension strips 15—15, and when the ladder tapes are spread apart, each slat supporting element includes a connecting bridge portion 17 and upstanding attaching leg portions 18—18. The inner sides of the leg portions 18—18 are adhesively secured to the inner sides of the suspension strips 15—15 as at 19. The upper ends of the leg portions 18—18 underlie the lower portions of the leg portions 18—18 of the next adjacent higher slat supporting element, whereby the suspension strips 15—15 are reinforced along their entire length by reason of the attaching leg portions 18—18. The paper from which the flat supporting elements 16 are constructed may be of a width corresponding to that of the strips 15—15, or they may be slightly narrower so as to be substantially concealed by the suspension strips 15—15. Each cross portion or bridge portion 17 is provided with an elongated slot 20 for the passage of the raising and lowering cords 21 of the Venetian blind 10. The suspension strips 15—15 may be of any desired color as may the slat supporting elements 16, depending upon the color scheme of the Venetian blind and the decorations of a room in which the blind is to be hung.

The Venetian blind slats 14 extend transversely of the ladder tapes 11—11, and are supported by the bridge or cross portions 17 of the slat supporting element. When the blind is in a fully opened position as illustrated in Figures 1 to 4 inclusive, the slats 14 assume a horizontal position, but by the manipulation of the tilting mechanism within the head rail, various adjustments of angularity of the slats is possible. When the

blind is raised, the slats assume a position in close relation to each other as illustrated in Figure 5, and due to the texture of the paper suspension strips 15—15, an even folding of the strips is obtained. This is not possible with the present conventional woven fabric ladder tapes now in general use.

From the foregoing description it will be seen that I have produced a simple and inexpensive Venetian blind ladder tape construction capable of withstanding the strain of ordinary use to which a Venetian blind is subjected. In the event that the ladder tape should become soiled or broken, the same may be readily disconnected from the head rail and the bottom rail, and a new tape substituted therefor, by one unskilled in the art.

While I have shown and described what I consider to be the most practical embodiment of my invention, I wish it to be understood that such changes and modifications as come within the scope of the appended claims may be resorted to if desired, without departing from the spirit of the invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A Venetian blind ladder tape comprising a pair of opposed suspension strips made of crepe paper, the creping of the paper extending crosswise of the strips for transverse flexing thereof, and paper cross strips having their ends respectively secured to the inner sides of the suspension strips.

2. A Venetian blind ladder tape comprising a pair of opposed suspension strips made of relatively heavy flexible crepe paper, and cross strips made of paper of a lighter texture than the suspension strips having their ends adhesively secured to the inner sides of the suspension strips.

3. A Venetian blind ladder tape comprising a pair of opposed flexible suspension strips made of crepe paper, flexible U-shaped paper slat supporting elements, each slat supporting element including a pair of attaching leg portions and a connecting bridge portion, and means securing the attaching leg portions to the inner sides of the opposed suspension strips.

4. A Venetian blind ladder tape as set forth in claim 3, in which the bridge portions of the slat supporting elements are provided with alined elongated slots for the passage of the raising and lowering cords of a Venetian blind.

5. A Venetian blind ladder tape comprising a pair of crepe paper suspension strips, and paper U-shaped slat supporting elements, each slat supporting element including a pair of attaching leg portions and a connecting bridge portion, said attaching leg portions being adhesively secured to the inner sides of the suspension strips.

6. A Venetian blind ladder tape comprising a pair of paper suspension strips, and paper U-shaped slat supporting elements, each slat supporting element including a pair of attaching leg portions and a connecting bridge portion, said attaching leg portions being adhesively secured to the inner sides of the suspension strips with the upper ends of the leg portions of one slat supporting element underlying the lower corresponding ends of the leg portions of the next upper slat supporting element.

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