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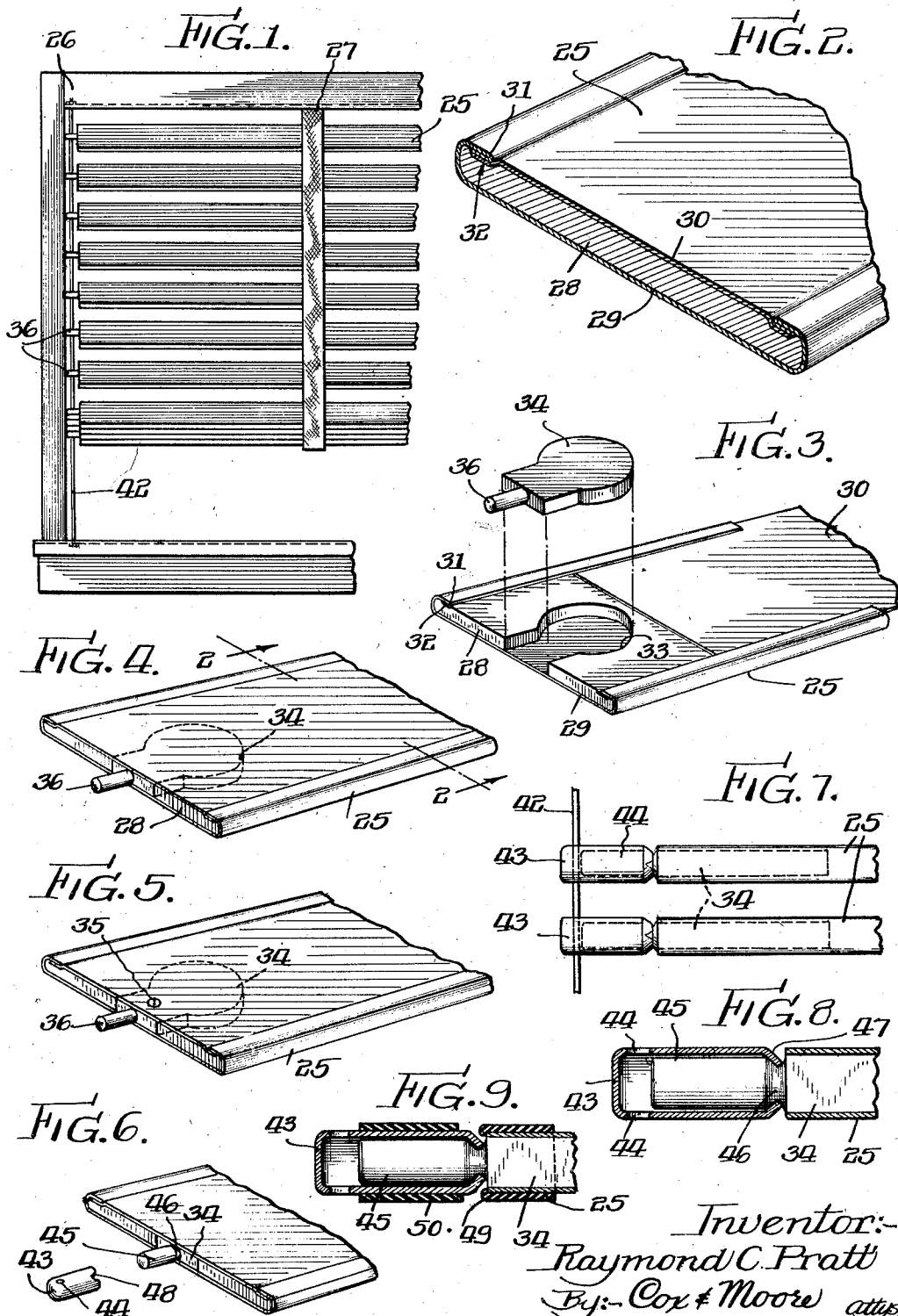
R. C. PRATT

2,174,249

VENETIAN BLIND

Filed May 14, 1936

2 Sheets-Sheet 1



Sept. 26, 1939.

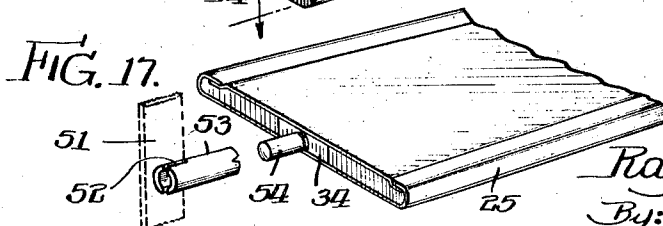
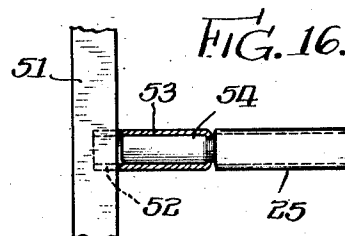
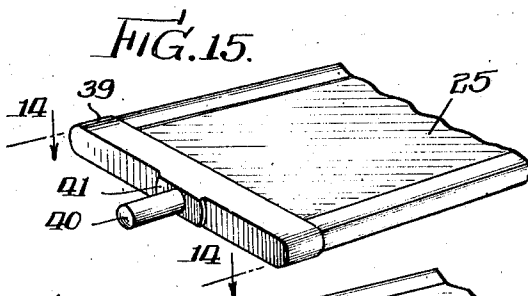
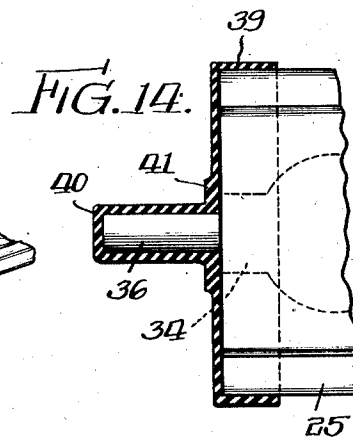
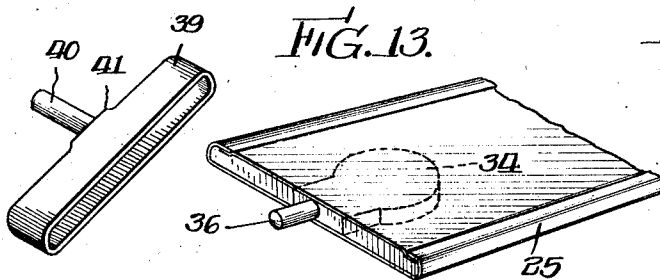
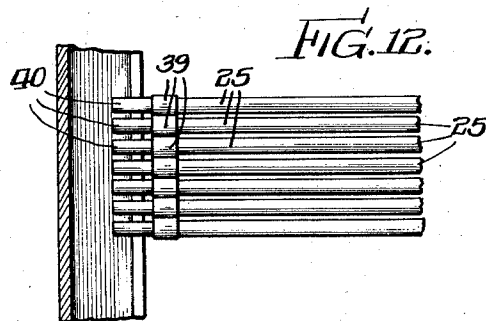
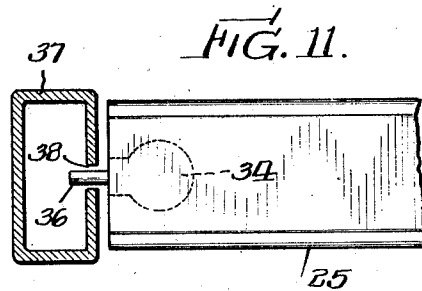
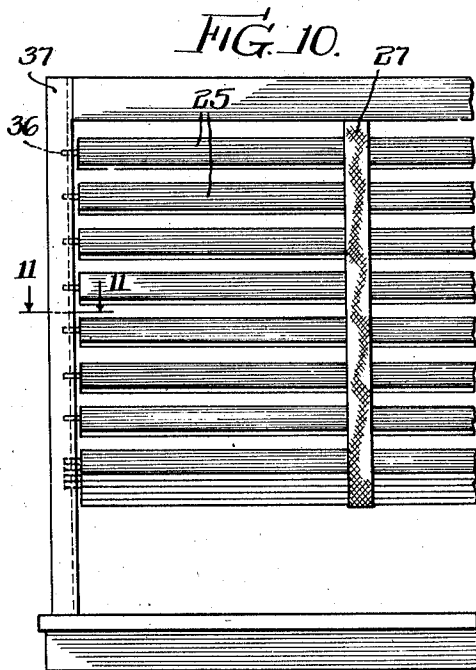
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VENETIAN BLIND

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,174,249

VENETIAN BLIND

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13 Claims. (Cl. 156—17)

This invention relates to window blinds and more specifically to those of the transverse slat type conventionally known as Venetian blinds.

One of the objects of the invention is the provision of an improved window blind which, by reason of its improved structure and silencing means is particularly adapted for use on railroad passenger cars and in other vehicles where vibration and continual movement would tend to displace ordinary blinds and render them noisy.

Another object of the invention is the provision of an improved construction for window blind slats having guides and means for engaging the guides.

A still further object of the invention is the provision of silencing means by which the parts of the blind are prevented from clashing together and the blinds are made quiet.

Another object of this invention is the provision of means whereby the slats when not in use will tend to "nest" together securely and quietly regardless of any normal vibration of the window frame.

A further object is the provision of a novel and improved slat structure having a smooth and highly desirable metallic surface.

These objects and other objects which will hereinafter appear are obtained by the novel construction, arrangement and combination of elements hereinafter described and claimed.

A window blind and a window blind slat and associated structure embodying the present invention are illustrated in the accompanying two sheets of drawings, in which—

Fig. 1 is a partial elevation of a window blind embodying the present invention mounted in a window frame in accordance with the invention;

Fig. 2 is an enlarged view in perspective of a section through one of the improved blind slats on line 2—2 of Fig. 4;

Fig. 3 is a view in perspective of an end of one of the improved slats showing a portion of the outside thereof slid back to disclose the interior structure with the pin holding member in disassembled relationship to the slat.

Fig. 4 is a view similar to Fig. 3 but showing the parts of the slat in their normal relationship;

Fig. 5 is a perspective view similar to Fig. 4 showing an additional fastening means;

Fig. 6 is a view in perspective of an end of one of the blind slats showing a rotary guide engaging cap removed from the pin on which it is carried;

Fig. 7 is an enlarged elevation of the ends of

two slats showing their attachment to a guide wire;

Fig. 8 is a further enlarged view from the same angle as Fig. 7 of one of the slats of Fig. 7, showing the guide engaging cap in section;

Fig. 9 is a view similar to that of Fig. 8 showing a cushioning hood or pad about the end of a slat and one about the guide engaging cap;

Fig. 10 is a view in elevation similar to Fig. 1 of a part of a window blind utilizing an alternative guide means;

Fig. 11 is a horizontal sectional view through the guide means illustrated in Fig. 10 on line 11—11 of Fig. 10, showing one of the slats in plan;

Fig. 12 is an enlarged vertical section from the same angle as Fig. 10 showing one end of a number of slats in compact arrangement and with cushioning pads thereon, in relation to the guide means shown in Fig. 10;

Fig. 13 is a view in perspective of the end of a slat and of a cushioning pad to be placed thereon;

Fig. 14 is an enlarged plan view of the end of one of the slats on line 14—14 of Fig. 15, showing in section the cushioning pad about the end of the slat;

Fig. 15 is a perspective view of the end of one of the slats with the cushioning pad in place thereon;

Fig. 16 is a view in elevation of the end of one of the slats, showing an optional type guide and showing in section a modified means for engaging the guide; and

Fig. 17 is a perspective view of the slat, the guide, and the guide engaging means shown in Fig. 16;

The window blind herein disclosed is of the type utilizing a plurality of transverse slats extending from one side of a window to the other and movable vertically and by tilting to alter the extent to which the window is covered thereby.

In Fig. 1 a window blind comprising slats 25 is shown in place in a window frame 26. A strap 27 passes across the edges of the slats and may serve to control the angle at which they are tilted. The slats may be lifted in the ordinary way by a cord, not shown, or in any other suitable manner.

Each slat 25 has a core 28 of wood or other fibrous material. About the core 28 is a sheath 29 of metal comprising a portion 29 extending across one face of the core, about the edges, and partially over the opposite face, and a second portion 30 extending across the opposite face of the slat and having its edges held beneath the edges

of the portion 29. Each edge of the portion 29 is turned under as at 31 to provide a rounded exposed edge.

Beneath the overlap of the edges 31 of the portion 29 and the edges of the portion 30 the core 28 is grooved as at 32. The groove may be produced by the compression of the material of core 28, or the groove 32 may be cut into the core 28 before the sheath is applied. It will be noted, therefore, that by using this structure the top surface of the slat will be relatively smooth and level in spite of the overlapping edge portions where the metal is joined.

At each end of the slat 25 a portion of the core 28 is cut away to provide an opening 33. Into the opening 33 is closely fitted an insert or holding member 34. The end of the opening 33 away from the end of the slat is larger than the end at the end of the slat, and the insert 34 is shaped in the same manner. When the insert 34 is in place in the aperture 33 it interlocks with the material of the core 28 and cannot be moved endwise from the slat. The portions 29 and 30 of the sheath extend over the opening 33 and the insert or holding member 34 therein and provide means to prevent the insert from displacement by lifting out of the opening at right angles to the plane of the slat.

Additional fastening means may be provided in the form of a rivet 35 passing through the insert 34 and portions 29 and 30 of the sheath. The insert 34 need not be of the shape shown but is preferably of a shape which will provide an interlocking effect with the core 28.

Extending from the exposed end of the insert 34 is a pin 36 providing guide engaging means. The exposed end of the insert 34 is flush with the end of the slat so that the pin 36 extends beyond the end of the slat. The pin 36 extending from the end of the slat 25 is engaged by a guide which will allow the window blind to move up and down but will not allow it to become displaced. The guide engaging the pin 36 may comprise a channel 37 which, in the form shown in Figs. 10, 11 and 12, is rectangular in section, and has a slot 38 along one face thereof to receive the pin 36. The channel 37 may comprise one of the elements of the window frame as indicated in Fig. 10. Alternatively, the channel member 37 may be distinct from the window frame and secured thereto.

Where window blinds of the type herein described are to be used in railroad trains or in other vehicles it is important that the blind shall not rattle. To secure this end each of the slats 25 is provided with a pad or hood 39 of some cushioning material such as rubber, cloth, felt, or the like to keep the slats 25 from clashing together.

In Fig. 12 a number of the slats 25 are shown arranged in fiat-wise relation with the pads 39 separating them. Each pad 39 is adapted to fit over the end of a slat 25 and has a projection 40 which serves as a cushioning hood over the pin 36. The hood 40 over the pin 36 cushions the pin against sharp and noisy contact with the sides of the slot 38 in the channel 37. About the projection 40 on the face of the hood 39 is a thickened area 41 which increases the cushioning effect of the hood between the slats 25 and the face of the channel member 37, and also re-enforces the junction of the projection 40 and the hood 39. Where it is not necessary to pad the end faces of the slats the pads 39 may comprise bands of cushioning material around the slats near the

ends. Other bands may encircle the slots between the ends.

In Figs. 1, 7, and 8 the guide shown comprises a wire 42 which is stretched between the top and the bottom of window frame 26 near one of the sides of the frame. Caps 43 having apertures 44 there-through to receive the wire 42 comprise guide engaging means. Each cap 43 is rotatably carried on a pin 45 which is similar in every way to the pins 36 except that a constricted neck 46 has been formed in the material of the pin adjacent the end of the slat 25. The pin 45 is carried on an insert or holding member 34 as has been described.

The cap 43 is secured rotatably on the pin 45 by means of an intumed funnel shaped flange 47 which engages the walls of the constricted neck 46 so that the cap 43 may rotate freely, but may not be displaced from the pin 45. The cap 43 is originally formed with its open end slotted as indicated at 48 in Figure 6, and when the cap is applied to the pin 45 the slots 48 are closed, producing the funnel shaped flange described and shown.

As shown in Fig. 9, pads or cushions 49 similar to the pads 39 already described may be applied over the ends of the slats 25 when the wire 42 is used as a guide. In place of the extension 40 on the pad 39 a sleeve 50 may be slipped over the cap 43 to prevent adjacent caps from clashing.

A further modification of the guide means and guide engaging means is shown in Figs. 16 and 17. In place of the wire 42 a ribbon 51 is stretched from the top to the bottom of the window frame. Alternatively, the ribbon 51 may comprise a rib extending outward from the window frame 26 and either forming a part of the frame or comprising an arm of an angle iron or the like secured to the frame. The ribbon 51 is engaged by a slot 52 in the end of a cap 53 which is similar in other respects to the cap 43 already described. Cap 53 is carried on a pin 54 in the same manner as was described with reference to cap 43. The pad or cushion 49 and the sleeve 50 illustrated in Fig. 9 may be applied where the ribbon 51 is used in the same manner as it is applied in connection with the wire guide 42.

The invention herein disclosed provides highly desirable qualities of strength, durability, rigidity, convenience and silence. It is to be understood that the embodiment disclosed is merely illustrative and that various modifications may be made therein without departing from the spirit of the invention.

What is claimed as new and is desired to be secured by Letters Patent of the United States is:

1. A window blind slat comprising a core of fibrous material, and a metal sheath about said core, said sheath comprising a portion covering one face of said slat, and a second portion covering the other face of said slat and extending around the edges thereof and overlapping the edges of said first portion, the edges of said second portion being turned under to provide a rounded edge.

2. A window blind slat comprising a core of fibrous material, a metal sheath about said core, and a hood of cushioning material about the end of said sheath.

3. In combination with a window frame, a window blind comprising a plurality of slats, a hood of cushioning material about the opposite ends of the slats and having a projecting portion forming a guide engaging means, and guide means along the sides of said window frame and

adapted to be engaged by said guide engaging means, said pads silencing said blind by preventing contact of hard parts with one another.

4. A window blind assembly comprising a plurality of slats, pins extending from the ends of the slats, pads of cushioning material over said pins and over the ends of said slats, and channel members adapted to receive said pins to guide said slats in movement thereof.

5. In combination with a window frame, a window blind comprising a plurality of slats, pins extending from the ends of the slats, pads of cushioning material over said pins and over the ends of said slats, and channel members extending along the sides of the window frame and adapted to receive said pins to guide said slats in movement thereof along the window frame.

6. A Venetian blind slat comprising a body, a projection extending from said body, and a flexible silencing member about the end of said slat and over said projection.

7. In a window blind, the combination of a plurality of superposed slats, each of said slats comprising a core of fibrous material, an insert at the end thereof and a metal sheath about said core and insert, the insert in each slat having a body portion narrower at the end of said core than inwardly thereof and a portion projecting outwardly from the end of said core, pads of cushioning material surrounding the projecting portions of the inserts in said slats and the adjacent ends of the metal sheaths, and fixed guide means adapted to cooperate with the projecting portions of said inserts and the pads of cushioning material surrounding said portions for guiding said slats.

8. A window blind slat comprising a core of fibrous material, guide engaging means extending beyond the end of said core, said guide engaging means comprising a cylindrical guide engaging portion and a portion engaging said fibrous

core for fixedly securing said means to said core, a metal sheath about said core and a hood of cushioning material surrounding the end of said sheath and the cylindrical portion of said guide engaging means.

9. A slat for a window blind having a guide, comprising a core of fibrous material, a metal sheath about said core, and a silencing element of cushioning material having a hood portion adapted to extend about the end of the sheath and a projecting portion extending outwardly therefrom and adapted to engage the guide.

10. A window blind slat comprising a core of fibrous material, a metal sheath about said core, guide engaging means extending beyond the end of said sheath, a pad of cushioning material about the end of the sheath, and a pad of cushioning material about said engaging means.

11. A guide attachment for the slat of a window blind having a guide at one side thereof, comprising a preformed member having a hollow body portion shaped to fit over an end of the slat and a projecting portion adapted to engage the guide at the side of the blind.

12. A silencing guide attachment for the slat of a window blind having a guide channel at one side thereof, comprising a preformed member having a hollow body portion shaped to fit over an end of the slat and a portion projecting laterally from the body portion thereof to form a pin adapted to engage the guide channel at the side of the blind, and a re-enforcing portion of increased thickness connecting the body portion to the pin portion.

13. A guide attachment for the slat of a window blind having a guide at one side thereof, comprising a preformed molded member having a hollow body portion shaped to fit over an end of the slat and a projecting portion adapted to engage the guide at the side of the blind.

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