Dec. 12, 1950 C. D. WALKER 2,533,298

VENETIAN BLIND

Filed Feb. 16, 1946

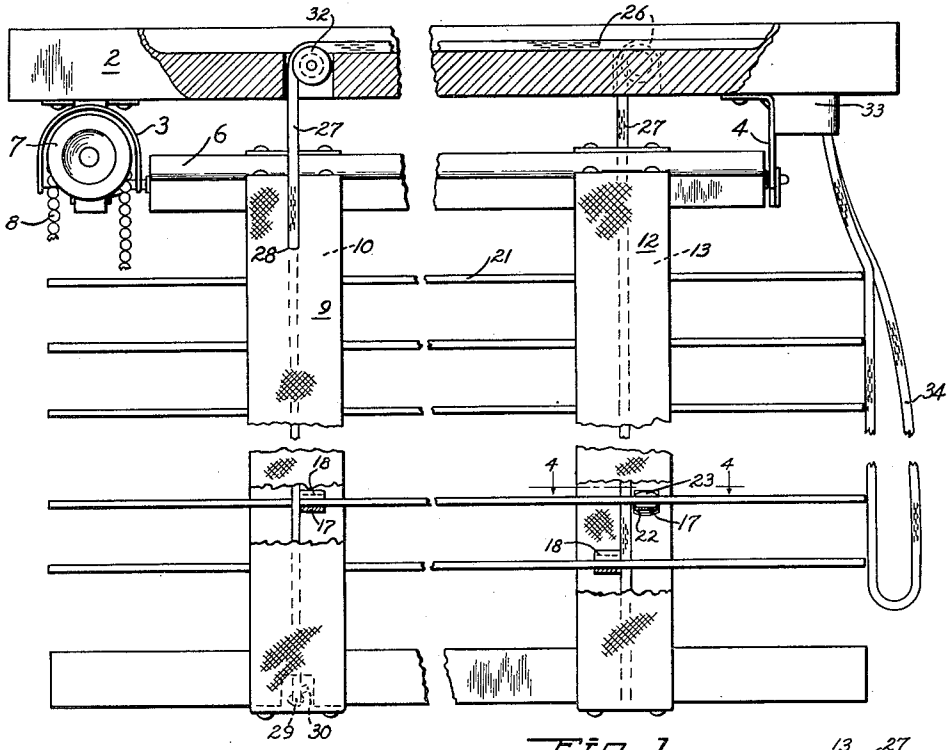


Fig. 1

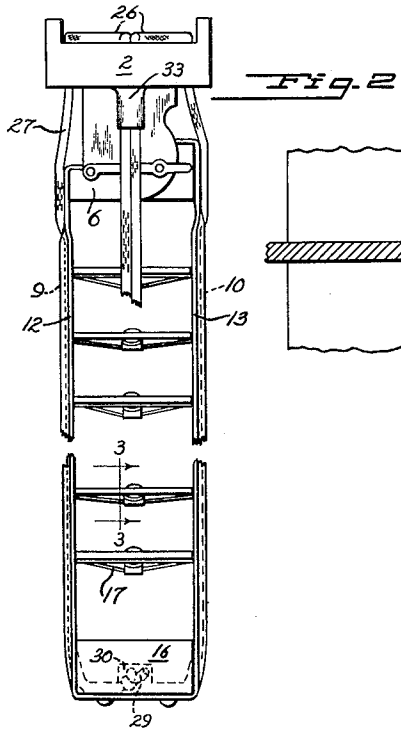


Fig. 2

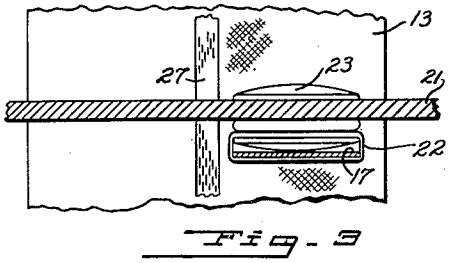


Fig. 3

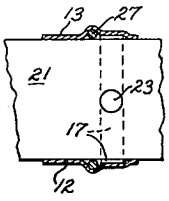


Fig. 4

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VENETIAN BLIND

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3 Claims. (Cl. 160—173)

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My invention relates to blinds of the overlapping slat type.

One of the objects of the invention is the provision of a simpler and cheaper blind structure, in which the elevator or suspension cords extend along the outer edges of the slats, instead of through apertures in them. Another object is the provision of a slat blind structure from which any slat may be readily removed and replaced without disturbing the other slats.

The invention possesses other valuable features, some of which with the foregoing will be set forth at length in the following description where those forms of the invention which have been selected for illustration in the drawings accompanying and forming a part of the present specification are explained. In said drawings, illustrative forms of the invention are shown, but it is to be understood that it is not limited to those forms, since the invention as set forth in the claims may be embodied in a plurality of other forms.

In the drawings: Figure 1 is an elevation of my Venetian blind. Portions of the figure are omitted to reduce its size; and portions of the structure are shown broken away to disclose parts otherwise hidden. Figure 2 is an end elevation of the structure shown in Figure 1. Figure 3 is a fragmental vertical section, the plane of section being indicated by the line 3—3 of Figure 2. Figure 4 is a fragmental horizontal section, the plane of section being indicated by the line 4—4 of Figure 1.

In terms of broad inclusion the blind structure of my invention comprises a conventional Venetian blind altered in structure so as to eliminate the passing of the elevator cords through the slat bodies, and also provide for readily detachable slats by digitally operable securing and releasing means interposed between each slat and its support. The head board, tip rail structure and supporting webs of the conventional Venetian blind are retained in my blind structure, but the elevator cords extend along the edges of the slats instead of through holes or notches in them, and the slats are retained between the webs on supporting bands extending transversely between the webs. Transverse movement of the slats between the webs and also quick detachment of any slat from the supporting bands, without disturbing other slats, is accomplished by providing a loop around the supporting band and a snap fastener between the loop and the slat.

In detail and referring to the drawings, by blind structure comprises a head frame 2, having brackets 3 and 4 in which the tip rail 6 is pivotally

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mounted. A conventional worm and worm gear operated by the pulley 7 and chain 8, provide means for varying the angular adjustment of the tip rail.

Pendantly supported from the tip rail adjacent each end are a pair of spaced webs 9 and 10, and 12 and 13, each pair conveniently forming a long loop in the bottom of which the lower rail 16 is secured. Extending transversely between the webs of each pair and spaced vertically at equal intervals are cross bands or rungs 17 secured at their ends to the webs by stitches 18 so that each pair of webs and their cross bands form a ladder-like assembly.

Lying between the webs of each pair and resting on the corresponding cross bands therein, are a plurality of imperforate slats 21. These slats are shown wide open in parallel horizontal planes in the drawings, but it will be understood that they respond to movement of the tip rail, tipping to close together in greater or lesser degree according to the angular movement of the tip rail about its pivots as controlled by the chain 8.

There is little tendency for a slat to be displaced from its supporting rungs, but to prevent side-to-side movement in the assembly; and to insure the relative position of each slat therein, a loop 22 is provided around at least one of the two supporting rungs for each slat, and this loop is detachably connected to the slat by digitally operable means such as a snap fastener 23. The loop permits a small desirable transverse sliding adjustment of the slats during manipulation of the blind, while at the same time securely retaining the slat in its relative position in the assembly. By a "digitally operable" releasable fastener, I mean a fastener quickly and easily secured and as quickly and easily released; and which requires only the fingers but no tools of any kind to operate. The well known snap fastener or glove fastener is the prototype of such digitally operable releasable fasteners as I have mentioned in the claims.

Conventional elevator cords 27 are arranged in the head board, but instead of being threaded through the slats as is the common practice, the ends are passed through the web at 28 to the inside face thereof and then along the edges of the slats between the web and the slats, and between the staggered slat-supporting bands. The ends 29 are knotted and caught in a shallow hole 30 in the lower face of the bottom rail 16. Only one elevator cord is used with each pair of webs, the two strands passing over pulleys 32 and through the usual latch mechanism 33 to form the loop

34, hanging at the side of the blind for the convenient raising and lowering of the slats.

Loop and snap fastener may of course be applied at both cross rungs for each slat, and on unusually long slats in large blinds that is desirable. For ordinary installations however, one loop and fastener to each slat are sufficient.

From the above it will be clear that any one of the slats, or all of them, may be easily detached and removed from the blind; and as easily replaced. This is important when it is remembered that when in place, the slats are difficult to clean or refinish properly; and that any repair or replacement involves taking the blind down and disassembling the parts. With my construction, any slat may be readily taken out and replaced without disturbing any of the others. The imperforate smooth edge slat of my construction with elevator cords along the smooth edges instead of through holes in the slats or through notches in the edges is a considerably cheaper construction since the formation of holes or notches, especially in wooden slats, is a relatively costly operation; and the formation of smooth edge holes or notches is costly. The absence of holes or edge notches in the slats through which the elevator cord runs, results in another advantage of durability, since the fraying of the cord on the edges of the holes or recesses has always been the most frequent cause of failure in the cord, with consequent failure of operation of the blind, and the necessity of a complete reassembly on new cord.

I claim:

1. A blind structure comprising a pair of vertically disposed supporting webs, a plurality of rungs transversely disposed at intervals between the webs and fixed at their ends thereto, a slat lying on each rung, and means including a loop around the rung and a snap fastener between the loop and slat for releasing the slat from the loop and rung and for securing the slat to the rung in transversely slidable relation to the webs.

2. In a Venetian blind having a ladder tape including rung tapes and slats supported thereon, a closed loop surrounding a rung tape and slidable therealong, and snap fastener means interposed between the loop and the adjacent slat.

3. In a Venetian blind having a ladder tape including rung tapes and slats supported thereon, a continuous permanently closed loop surrounding a rung tape and slidable therealong, and snap fastener means interposed between the loop and the adjacent slat.

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