Sept. 10, 1946. S. G. ISSERSTEDT 2,407,554

BLIND

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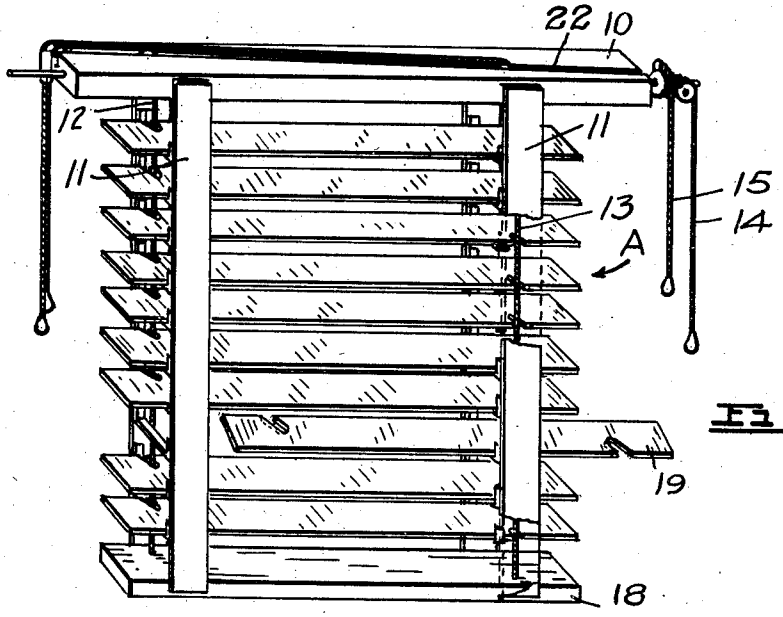


Fig. 1.



Fig. 2.

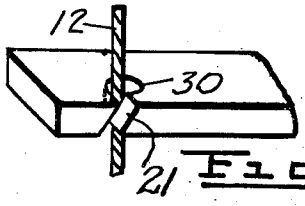


Fig. 3.

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BLIND

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2 Claims. (Cl. 160—173)

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This invention relates to improvements in blinds of the type usually known as Venetian blinds and consisting of a number of parallel slats of wood, metal or other suitable material connected as a unit, capable of being raised and lowered and of being tilted about their longitudinal axis. Blinds of this type employ tapes or the like for suspending the slats in spaced parallel relation one to the other and are raised and lowered by means of cables which are passed through slots or holes disposed through the centre portion of opposite ends of the slats and aligned with one another from one slat to the other.

While blinds of this character are a source of great convenience, they have one serious disadvantage in that the individual slat becomes coated with dust and foreign material which makes it necessary for frequent cleaning. This, however, presents a substantial problem. On the one hand, it is very difficult to clean a blind of this kind unless the blind is taken apart. On the other hand, a relatively long and arduous task confronts the cleaner, who must disassemble the blind by undoing the cables and unthreading each slot from the assembly. This applies in both disassembling and assembling the blind.

This disadvantage can be readily overcome in a very simple way whereby to permit efficient cleaning of the individual slats of the blind in a minimum time and with a minimum of effort. Moreover, while replacement of broken slats in a blind of this character presents a similar difficulty, due to the fact that the various slats have to be disassembled in order to insert the replacing slat or slats, the disassembling of the blind for this purpose can be avoided and a replacement slat or slats put in place with a minimum of effort.

It is therefore an object of the present invention to provide a blind of the Venetian type from which the slats may be individually removed and replaced for cleaning purposes.

A further object of the invention is to provide a blind of this type to which broken slats may readily be replaced without disturbing others of the suspended series of slats.

A further object of the invention is to provide a blind of this character which is easier to manufacture and assemble than the conventional Venetian blind hitherto employed.

A further object of the invention is to provide a blind of this type in which the slats are stronger than in the conventional type hitherto used.

A still further object of the invention is to provide a blind structure which will collapse more readily especially when the slats are deflected from their horizontal position.

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With these and other objects in view, the invention generally comprises a blind structure of the Venetian type in which the slats are suitably notched on opposite sides or ends to engage the suspending cables and maintain the slats in uniform arrangement. This constitutes the preferred general embodiment of my invention, which requires but a slight tilting movement to disengage any individual slat from the suspending cables in order to remove it from the blind. A like result may be obtained while employing slots or notches extending inwardly from one edge of the slat only, whereas various arrangements and types of slots may be employed.

The invention will be clearly understood by reference to the following detailed specification taken in conjunction with the accompanying drawing which forms part of the same.

In the drawing,

Figure 1 is a perspective detail of a blind of the Venetian type fitted with slats formed according to the present invention, for individual insertion and removal.

Figure 2 shows a plan view of a preferred formation of slat.

Figure 3 is a fragmentary perspective detail of a slat showing an alternative form of notch or slot somewhat of the bayonet type but employing a mouth which is inclined to the plane of the slat, more securely to retain the cable in normal position relatively to the slat.

Referring to the drawing, A indicates a blind assembly of the Venetian type which employs a suspension head 10 and suspension tapes or straps 11 designed to suspend the slats in parallel spaced apart relation to one another in the conventional manner. It also employs the raising and lowering cables 12 and 13 disposed alternatively at each end of the slats.

The blind also includes the control cords 14 and 15 for inclining or tilting the slats, but specific features of this part of the structure do not require detailed illustration or explanation.

Instead of employing transverse slots in each end of the slat, as has been the common practice up to the present time, I notch the slats in such a manner that they will perform exactly the same function as the slot of the conventional type, but instead of having the disadvantageous limitation of the conventional slot this notched construction will permit the individual insertion or removal of a slat from the whole assembly, which

provides for several advantages, apart from the advantages of ease of manufacture and strength of the slats.

Referring first of all to Figure 2, it will be noted that the slat is notched as at 16 and 17 at an incline to its longitudinal axis on opposite side edges and at opposite ends in a position corresponding with the location of the cables in the blind of which the slat is to form a part. As the slots of the previous conventional type of blind are employed merely as a passage for the cable and as a means for limiting the longitudinal movement of the slat, it is obvious that these functions are readily performed by the notches 16 and 17. Moreover, it is also obvious that the slat, as a whole, is stronger due to the fact that these notches eliminate the necessity for any substantial cutting of the slat.

In the case where relatively shallow notches, such as 16 and 17, are employed and spaced from the centre line of the slat, the cables 12 and 13 of the blind correspondingly are located off centre. This is clearly illustrated in Figure 1 when considering the bottom board 18 of the blind. This also presents an advantage in that it permits the blind to be raised and lowered with better balance.

The insertion or removal of a slat of this type from the blind is obviously a very simple matter. It is only necessary to turn the slat about its long axis when the blind is suspended, as shown in Figure 1, whereupon the notches 16 and 17 are disengaged from the cables 12 and 13 and the slat can then readily be removed by pulling it axially, which operation is illustrated by the disengaged slat 19 shown in Figure 1.

The foregoing will clearly illustrate the simple principle of the present invention. This principle obviously may be applied in various types of construction. For instance, in the case of long slats where more than two cables are employed, the principle is carried out merely by adding additional notches to accommodate the extra cables and locating these notches so that a balanced condition is obtained.

In Fig. 3 a notch or slot 20 somewhat of the bayonet type is provided, the mouth of which 21 is disposed at an incline to the plane of the slat. Slots of these types may be preferred in some cases as they tend more firmly to retain the slats in cooperative arrangement with the cables.

While I prefer to employ a relatively shallow notch from several points of view and to dispose the notches in opposite relation on opposite sides of the slat, on the other hand it is possible to provide a construction wherein notches are employed disposed on one side only of the slat.

In employing a notch in each of the opposite side edges of the slat, as in the preferred form of construction, the operating cables for raising and lowering the blinds may readily be disposed in an inclined groove, such as indicated at 22, in the head board with the guide pulleys also disposed in this groove, so that the cables will then readily be led to their respective locations spaced apart transversely of the head board. This requires but a simple operation in the manufacture of the blind structure inasmuch as one inclined groove of the character referred to is all that is required. Alternatively, however, a wide longitudinal groove might be employed running parallel with the side edges of the head board and wide enough so as to accommodate the transverse spacing necessary between the two lifting cables, apart from the longitudinal spacing necessary.

It is obviously a very simple matter to detach the slats from the blind assembly, thoroughly and quickly clean them, then return them to their normal location. Likewise, broken slats are easily replaced. Moreover, the proposed improvement provides the additional advantages of stronger slats and the opportunity for a better balanced blind.

Two further important advantages result from the employment of the notched removable slats. On the one hand, the slats may be moved closer together than in the prior type, when it is desired to tilt them to closed position. This results through the fact that there is nothing to interfere with the complete closing of the slats in the case of the present invention, in contrast to the fact that in the prior type of blind of this character, the slots employed in the centre area at each end of the slat, for the passage of the cables, necessarily engage these cables when the slat is inclined to a substantial degree, thereby kinking the cable slightly and consequently preventing complete closing of the slats. On the other hand, the further advantage of the present invention is that it will permit the easier raising and lowering of the blind when the slats are fully inclined or in the closed position as there is nothing to interfere with the easy upward or downward sliding motion of the slats, whereas in the prior type of blind the passage of the cables through the slots just referred to, and the engagement of the slats with these slots when in the fully inclined position, tend to interfere with the smooth raising or lowering of the blind in these circumstances. Thus, a substantial improvement in operation and use results under the present invention.

These advantages apply at least in part also to the manufacture of the blind. It will be apparent that a simple notched construction may be more readily manufactured than the conventional slotted type. It may also be assembled much more readily and consequently the time of manufacture and assembly is reduced making it possible to produce a blind of this type more economically.

What I claim as my invention is:

1. A slat for a blind of the Venetian type comprising an elongated strip of material having a plurality of notches extending inwardly from a peripheral edge of the strip at an incline to the longitudinal axis thereof, and located in spaced apart relation to one another, said notches forming guideways for cables of the blind when said strip is assembled with other strips in a blind unit and forming means to cause individual removal of the strip from the blind unit when partially rotated about its longitudinal axis and axially moved away from the unit.

2. A slat for a blind of the Venetian type comprising an elongated strip of material having a pair of notches extending inwardly from a peripheral edge of the strip at an incline to the longitudinal axis of the strip and located in spaced apart relation to one another, said notches forming guideways for the cables of the blind when said strip is assembled with other strips in a blind unit, said notches being located in opposite edges of the strip, said slat being capable of partial rotation about its longitudinal axis to disengage said notches from the cables of the blind unit and rotatable into engagement with the cables of the blind unit when respectively removing said slat from and introducing it into a blind unit.

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