

(No Model.)

S. PALMER.

WINDOW BLIND SLAT.

No. 346,678.

Patented Aug. 3, 1886.

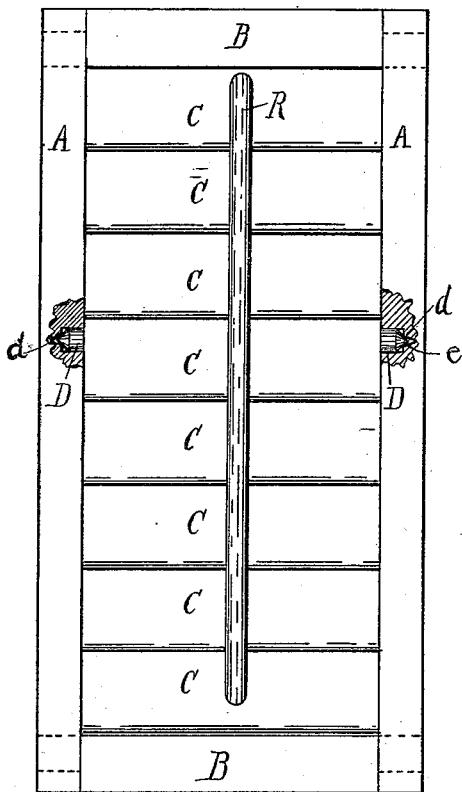
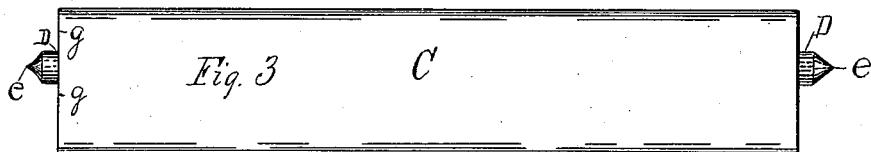
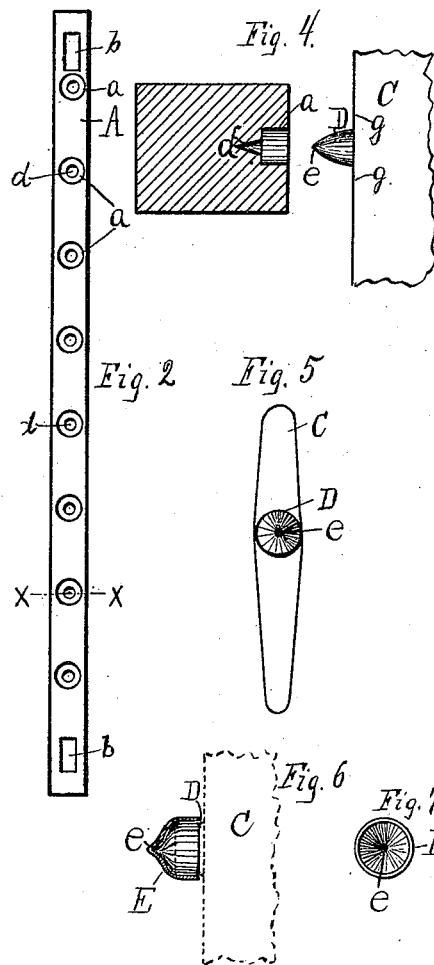


Fig. 1



WITNESSES

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UNITED STATES PATENT OFFICE.

STEPHEN PALMER, OF LANSINGBURG, NEW YORK.

WINDOW-BLIND SLAT.

SPECIFICATION forming part of Letters Patent No. 346,678, dated August 3, 1886.

Application filed December 31, 1885. Serial No. 187,265. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN PALMER, a resident of Lansingburg, in the county of Rensselaer and State of New York, have invented 5 certain new and useful Improvements in Window-Blind Slats; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make 10 and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the 15 several figures therein.

My invention relates to improvements in window-blind slats, and more particularly to slats adjustable or rotary in the blind-frame.

In the construction of window-blinds the 20 blind-frame is made up of two stiles or upright pieces provided with mortises at their ends, and of an upper and lower rail provided with tenons on their ends adapted to fit said mortises. The frame is adapted to receive adjustable slats by boring with a bit or 25 auger a series of equidistant cylindrical holes for dowel-seats in the stiles on their sides, which face each other when framed, and of a uniform size and depth approximating the size and 30 length of the dowels or pivots which are formed on the ends of the respective slats. The dowels of the slats and the tenons of the rails are inserted in their respective seats and mortises in the stiles, and the stiles forced against the 35 tenon-shoulders of the rails, where they are securely fastened, and when the individual slats are secured to the blind-rod the construction is substantially formed. It not unfrequently happens that the stiles warp and bend 40 in use, which forces them slightly out of parallel and causes them to impinge upon the dowel-faces or slat ends so tightly as to make it impracticable to adjust them, or leaves the slats so loose they will not remain in the desired position to which they have been adjusted.

The object of my invention is to provide a 45 blind-slat easily adjusted, adapted to resist the power of the elements to change its adjustment, and adapted to conform to changes 50 in the relative position of the parts of a blind-

frame without materially enhancing the cost or changing the general style of construction heretofore in use.

Figure 1 of the drawings is a front elevation of a window-blind with a portion of the stiles 55 broken away to show the slat-dowel and their seats in the stiles. Fig. 2 is an elevation of the side of a detached stile facing the slats when framed. Fig. 3 is a plan view of a blind-slat detached. Fig. 4 is a cross-section taken 60 at broken line X X in Fig. 2. Fig. 5 is an end view of slat shown in Fig. 3. Fig. 6 is a central section of a metallic cap for the slat-dowel. Fig. 7 is a plan view of the open end or base 65 of the cap.

A A are the stiles, and B B the rails of the blind-frame which support the slats C. The slats are connected with each other in the usual manner by a rod, R. Each slat is provided at its ends with a cylindrical dowel, D, 70 adapted to enter a corresponding aperture or seat in the stiles. The seats a are formed in the usual manner by a bit or auger. The screw of the bit forms a small aperture, d, in the center of the bottom of the seat. By providing 75 the dowels with a tapering or beveled end, e, projecting centrally from the end of the dowel, the point of which is a little smaller than the central aperture, d, the beveled end will find its proper seat in the central aperture and pivotally support its slat.

I have ascertained by experiment that this method of construction has many advantages over the old method, among which are the following: The stiles being made of a soft yielding 85 material, that part which surrounds the aperture d will yield sufficiently to permit the beveled end of the dowel to be forced a considerable distance into the aperture after it has been advanced to contact with its edges or walls, 90 whereby a firm seat can be given to all the dowels, notwithstanding the fact that some may be shorter than others, and that some of the seats may be deeper than others. Furthermore the bearing-points of the ends d being so 95 near their longitudinal axis on account of their small diameter, the slats can be easily turned by rod R, even when a very considerable pressure is exerted by the stiles upon all the dowels. At the same time the resistance afforded 100

by the pressure of the stiles upon some of the dowel ends will be sufficient to prevent the slats from rattling or being turned by the wind. In case the stiles warp or bend slightly out of 5 parallel, the result is simply to increase or diminish the pressure of the stiles upon some of the dowel ends without materially changing or affecting the operation of the slats.

The mortises *b* in the stiles are adapted to 10 receive the tenons shown by dotted lines in Fig. 1 of the rails, by which the frame is held together, as before described.

When desired, the conical ends of the dowels 15 may be covered by similarly-shaped metallic caps *E*. (Shown in Figs. 6 and 7.) These caps may be swaged out of thin sheet metal and slipped onto the ends of the ordinary dowels, such as shown by the dotted lines in Fig. 6.

In forming the beveled or conical end of the 20 dowel I do not desire to limit myself to any particular angle or form of bevel, as it may be conico-sublulate or conic-ovate, but the form should approximate those shown in the drawings, or some of them, it being necessary to 25 produce a point or vertex which will enter the mouth of the small central aperture, *d*.

The cylindrical portion of the dowel may be 30 of any desired length or the dowels may be tapered from their shoulders *g*.

I am aware that a conical dowel or pivot

and differential socket respectively on the slat and in the stiles are not new; but wherever used the shoulder around the larger end of dowel fits flat down upon the surface around the top of the conical hole in stile; hence it 35 does not answer my purpose. I am only aiming to improve the ordinary slat-blinds and stiles made of wood. The stiles are very liable to warp and the dowels to be slightly different in length, so that when put together they 40 will not joint nicely, but make an unworkman-like job, to which serious objections are made. By making my conical hole so small relatively to the cone or taper of dowel that the latter may be seated to a greater or less extent, I can 45 always obtain a snug fit and turn out work to which no objection can be made; hence,

What I claim as new, and desire to protect by Letters Patent, is—

The combination, with window-slats having 50 tapered dowels or pivots, of the stiles *A A*, having below the seats *a* conical apertures *d*, which are made on a more acute angle than the dowels, as and for the purpose specified.

In testimony whereof I have hereunto set my 55 hand this 28th day of December, 1885.

STEPHEN PALMER.

Witnesses:

GEO. A. MOSHER,
CHAS. L. ALDEN.