(No Model.)

# W. MORSTATT.

## MEANS FOR ADJUSTING BLIND SLATS.

No. 360,612. Patented Apr. 5, 1887.

Fig. 1.

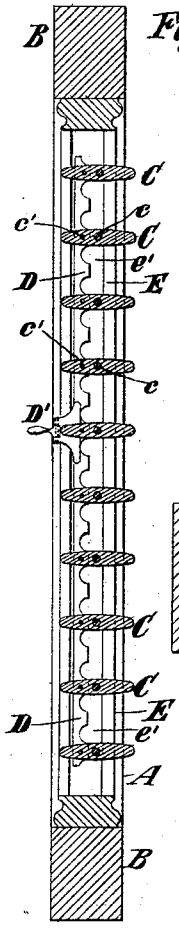



Fig. 2.

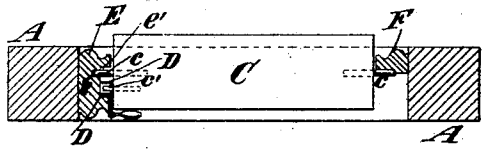



Fig. 3.

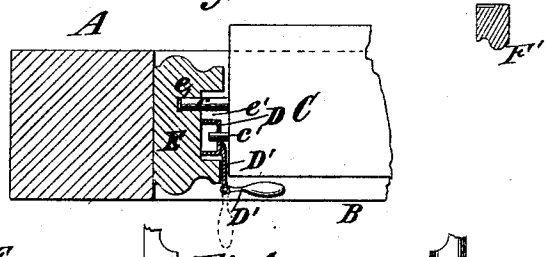



Fig. 4.

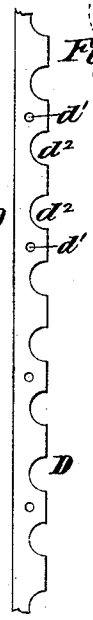
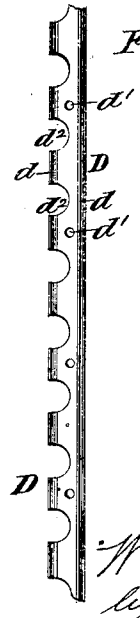



Fig. 6.




Fig. 5.




Witnesses.

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# UNITED STATES PATENT OFFICE.

WILLIAM MORSTATT, OF NEW YORK, N. Y.

## MEANS FOR ADJUSTING BLIND-SLATS.

SPECIFICATION forming part of Letters Patent No. 360,612, dated April 5, 1887.

Application filed May 15, 1886. Serial No. 202,233. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MORSTATT, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Means for Adjusting Blind-Slats, of which the following is a specification.

My invention relates to blinds in which the slats are provided, in addition to their central pivots, with pins eccentric to the said pivots, and in which is employed an adjusting rod or slat receiving the eccentric pivots of the blind-slats.

In blinds of the kind above described it is necessary that the eccentric pivots or pins of the blind-slats should have a considerable length of bearing in the slat-adjusting rod, in order that any endwise play of the slats or side play of the slat-adjusting rod shall not disengage the rod from the eccentric pins or pivots. It is also necessary that the said rod shall be sufficiently stiff to serve the purpose intended, and that it shall be at the same time of little height, so that it will not by its weight move the slats after they are adjusted to the desired position.

The invention consists in the combination, with a blind-frame and slats pivoted therein and having pins eccentric to their pivots, of an adjusting-rod connecting the eccentric pins of the slats and consisting of a strip of plate metal having its opposite longitudinal edges turned over, so as to form parallel flanges extending inward from the body of the strip at approximately right angles thereto, and receiving between them the eccentric pins of the slats, the rod being notched at the inner edge and through one flange to pass over the pivots of the slats. By this construction I provide a rod which is adapted to receive comparatively long pins upon the slats, and which therefore does not permit the disengagement from it of said pins by any endwise movement of the slats which can take place, and said rod combines the additional qualities of stiffness and light weight, which are desirable to fit it for the purpose intended.

The invention also consists in the combination, with the slats and adjusting-rod, of a hand-piece extending from the rod and comprising a portion hinged to swing horizontally into position parallel with the face of the blind when not in use and into a position at right angles thereto when required for use.

In the accompanying drawings, Figure 1 is a vertical section of a blind embodying my invention. Fig. 2 is a horizontal section of the blind, a portion of one of the beads which form the inner frame being slightly removed from the remaining parts to show more clearly the manner of assembling the parts. Fig. 3 is a sectional view similar to Fig. 2, but on a larger scale, of one side portion of the blind. Figs. 4 and 5 are respectively a face view and a perspective view of a portion of the adjusting-rod; and Fig. 6 is an end view of the rod.

Similar letters of reference designate corresponding parts in all the figures.

The main frame of the blind is composed, as usual, of upright stiles A and top and bottom cross portions, B. The slats C have the usual pivots, *c*, and at one end, in addition to the pivots *c*, pins *c'*, which are eccentric to the pivots. These pivots and pins are all formed of metal driven into the ends of the slats, and the pins *c'* are usually of smaller size than the pivots *c*. The eccentric pins *c'* are all connected by an adjusting-rod, D, which I shall hereinafter describe, and the construction of this rod renders it possible to bring the eccentric pins *c'* near to the pivots *c* and remote from the edge of the slats. This is advantageous, because then the slat is of considerable thickness where it receives the pin *c'*, and there is less liability of splitting the wood in driving the pin; but from long experience I have found that, particularly in hard-wood blinds, there is no danger of splitting the slats, provided the pivots *c* and pins *c'* are driven into holes of suitable size previously bored for their reception.

Within the main frame A B is an inner frame, which comprises upright beads, designated, respectively, E and F F'—that is to say, the bead E is of a single piece and the bead at the opposite side is formed of two pieces, F F'. The bead E is bored with holes *e*, to receive the pivots *c*, at one end of the slats, and the bearings for the pivots at the other end of the slats are formed in the upright meeting faces of the bead portions F F'. The bead E has

upon its inner face a channel, $c'$, which receives the adjusting-rod D, and hence this bead serves to conceal the rod.

The adjusting-rod D is formed of a strip of comparatively thin metal, which has its opposite longitudinal edges turned inward, so as to form flanges $d$, which are parallel with each other and at right angles to the body or face of the rod. The rod is provided with holes $d'$, which receive the eccentric pins $c'$ of the slats, and between these holes it has formed in it, at the edge which is adjacent to the pivots $c$, pairs of notches $d^2$, which enable the rod to pass over the pivots, and which receive the pivots when the rod is adjusted to close the slats, and thus enables the slats to be tightly closed. Between each two holes $d'$ there are two notches, $d^2$, one or other of which receives the pivot $c$ of a slat when the rod is adjusted either upward or downward. Where the eccentric pins $c'$ are arranged as close to the pivots $c$ as are shown, it is necessary that the notches $d^2$ should be in pairs between each two holes $d'$, because a single notch placed midway between each two holes $d'$ would be too far distant from them.

The adjusting-rod D is provided with a hand-piece, D', which projects to the front of the blind, and by which it may be operated.

In assembling the parts, the bead E is secured to the stile A, and the bead-section F is also secured to the opposite stile. The slats and adjusting-rod are then placed in position, as shown in Fig. 2, and afterward the bead-section F' is placed in position and secured to one side of the stile. The bead E and bead-sections F F' may be secured in place either by screws or nails.

In order to obtain greater leverage for operating the adjusting-rod D, the hand-piece D' may comprise a hinged portion, which may be swung horizontally, so as to lie parallel with the face of the blind, as shown by full lines in Figs. 2 and 3, when not in use, and which, when desired for use, may be swung outward at right angles to the face of the blind, as shown by dotted lines in Fig. 3 and by full lines in Fig. 1, so as to afford a considerable leverage for the hand in shifting the rod D.

It is desirable to employ an adjusting-rod, D, composed of sheet or plate metal, having its longitudinal edges bent over to form flanges extending in the same direction at right angles to the face of the rod, in order that the rod shall be very light and stiff, and at the same time shall afford a sufficient thickness or space between its face and the edges of the flanges to permit the use of eccentric pins $c'$ of considerable length. When such pins have considerable length it is not possible for them to become disengaged from the rod D by any movement of the slats lengthwise, or by any side movement of the rod which can occur.

I am aware that it is not new to employ for connecting the eccentric pins of blind-slats a flat rod or strip of metal made of uniform thickness throughout its width and having parallel faces, and I do not claim such a rod as included in my invention. With such a rod any increase in the length of the eccentric pins of the slats necessitates a corresponding increase in the thickness of metal in the rod, and therefore a proportionate increase in its weight.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a blind-frame and slats pivoted therein and having pins eccentric to their pivots, of an adjusting-rod connecting the eccentric pins of the slats and consisting of a strip of plate metal having its opposite longitudinal edges turned over or bent so as to form parallel flanges extending inward from the body of the rod at approximately right angles thereto and receiving in the space between them the eccentric pins of the slats, the rod being notched at the inner edge and through one flange to pass over the pivots of the slats, substantially as herein described.

2. The combination, with the slats C and the adjusting-rod D, of the hand-piece D', comprising a portion hinged to swing horizontally into position parallel with the face of the blind when not in use and into a position at right angles thereto when required for use, substantially as herein described.

WILLIAM MORSTATT.

Witnesses:
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FREDK. HAYNES.