(No Model.)

J. K. BENWAY.

VENETIAN BLIND.

No. 480,548. Patented Aug. 9, 1892.

Fig. 1.

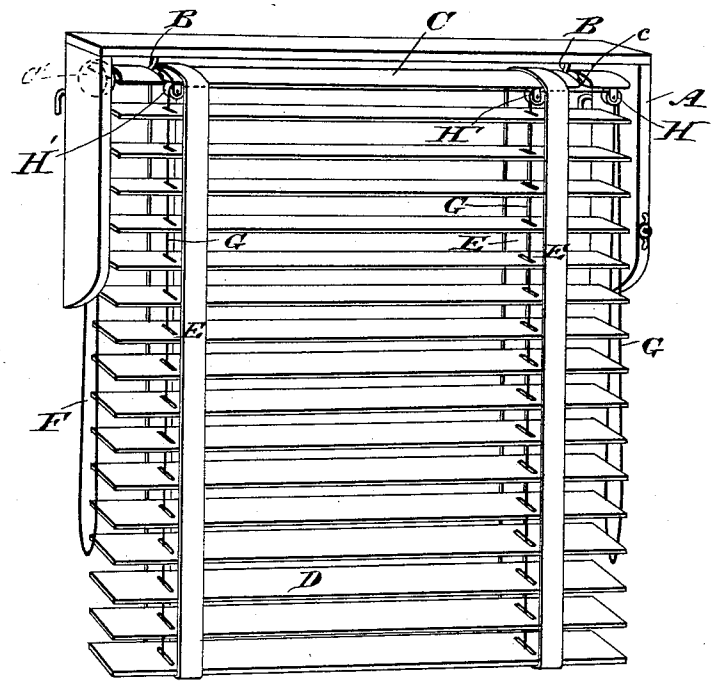


Fig. 2.

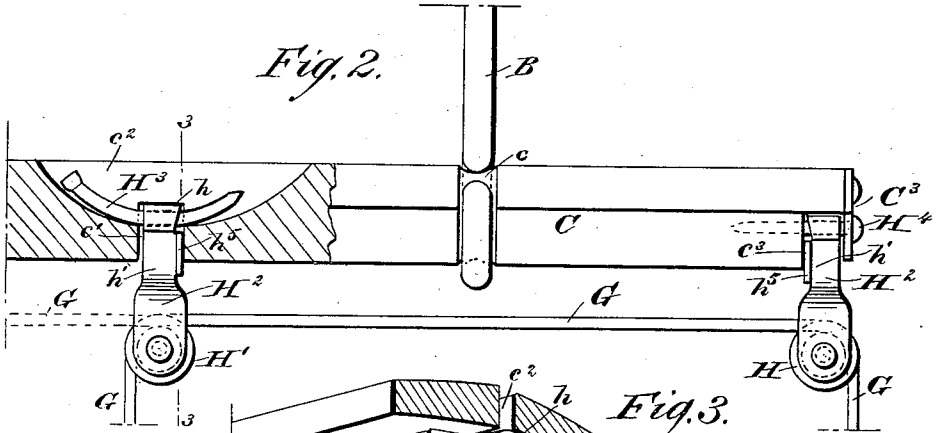
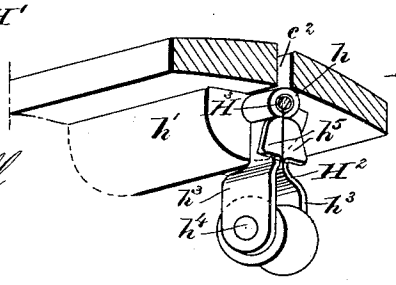


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES K. BENWAY, OF ALBANY, NEW YORK, ASSIGNOR TO THE ALBANY VENETIAN BLIND COMPANY, OF SAME PLACE.

VENETIAN BLIND.

SPECIFICATION forming part of Letters Patent No. 480,548, dated August 9, 1892.

Application filed November 24, 1891. Serial No. 412,975. (No model.)

To all whom it may concern:

Be it known that I, JAMES K. BENWAY, of Albany, in the county of Albany and State of New York, have invented a new and Improved Venetian Blind, of which the following is a full, clear, and exact description.

The invention relates particularly to the pulleys over which pass the cords for raising and lowering the slats of Venetian blinds, the object being to improve such pulleys to the end that the slats will respond to the cords more smoothly and with precision and the hangers of the pulleys be prevented from marring the bar from which they are suspended.

The invention consists in the novel construction hereinafter particularly described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a Venetian blind embodying my invention. Fig. 2 is a detail view, partly in section and on an enlarged scale, of a portion of the upper bar and its immediate appurtenances, including my improved pulleys; and Fig. 3 is a sectional perspective view, the section being indicated by the line 3 3, Fig. 2.

The blind shown in Fig. 1 is, in the main, in accordance with the invention disclosed in United States Patent to J. E. Phillips, dated January 1, 1884, No. 291,222; but my improved pulleys are applicable to other forms of Venetian blinds. In the form shown there is a frame or cornice A, provided at its top rail with depending hooks B, the latter engaging the journals *c*, formed on the top bar C, the blind-slats D being suspended in spaced positions from said bar by strips E of webbing. In some cases hooks B are screwed into head-jamb of the window, thus avoiding the use of cornice A. At one end of the bar C a pulley C′ is secured, over which passes the cord F, whereby the bar C, and consequently the slats D, may be tilted.

The cords G, by which the slats are raised and lowered, pass over a pulley H at the opposite end to the pulley C′ and over pulleys H′, which are suspended from the bar C intermediate its ends, the said cords G passing thence downward through the slats D to the bottom one of such slats. With the exception of the pulleys H H′ and their means of suspension, as hereinafter described, the above parts are in accordance with the patent of J. E. Phillips above referred to.

The hangers H^2 of the pulleys H H′ are formed, preferably, from a single piece of metal bent upon itself, forming at the bend an eye *h*, a shank *h′* below said bend, and a fork or spaced ends h^3 below said shank, the pulley being held by a pin h^4 between said spaced ends. Projecting from the members of the shank *h′*, at right angles thereto, are wings h^5, formed, preferably, by bending outward the metal forming such shanks.

The upper end of each hanger H^2 of the pulleys H′ is let into a transverse recess or slot *c′*, formed in the under side of the bar C, which recesses are intersected by concave recesses c^2, formed longitudinally in the upper side of said bar. A wire nail or like device H^3 is passed into the upper recesses c^2 to pass through the eye *h* of the hanger, thereby suspending the hanger in secure position, while permitting it to retain the vertical position when the bar C is rocked to tilt the slats. The wings h^5, it will be seen, bear against one wall of the slot *c′* when the cords G are drawn upon and protect the said wall from any injury by the hangers, and also prevent the hangers from twisting. Further, in the tilting of the bar C the broad surface presented by the wings will prevent the hangers from catching in the walls of the recesses.

By this improvement the operations of the blind are more positive and attended with less inconvenience, and the pulley-hangers can in no way mar the bar from which they are suspended. The shank of the end pulley H is reversed, its wings lying against the wall or end c^3 of the bar C, as the strain is inward on such hanger. The upper part of the bar C overhangs at this end and is provided with a plate C^3, which is secured thereto, and a nail H^4 or the like, passed through said plate, through the eye *h* of hanger, and into the wall c^3, serves to suspend the said hanger.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a Venetian blind, of a top bar, slats suspended from said bar and operating-cords for the slats, the bar being formed with recesses in its under side, and pulleys for the operating-cords, the hangers of the pulleys being pivotally suspended from the bar within the recesses therein and having its shank provided with wings projecting at right angles thereto, substantially as described.

2. The combination, in a Venetian blind, of a top bar, slats suspended therefrom and operating-cords for the slats, the said bar having transverse recesses in its under side and intersecting longitudinal recesses in its upper side, hangers carrying pulleys for the operating-cords, the hangers having wings thereon for the purpose specified, and securing devices for said hangers, substantially as described.

3. As a new article of manufacture, a pulley for the cords of Venetian blinds, the hanger of the pulley having an eye at its upper end adapted to receive a pivot-pin for pivotally suspending the pulley, and a guard-wing below the eye, said wing ranging at right angles to the axis of the eye, substantially as and for the purpose specified.

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