

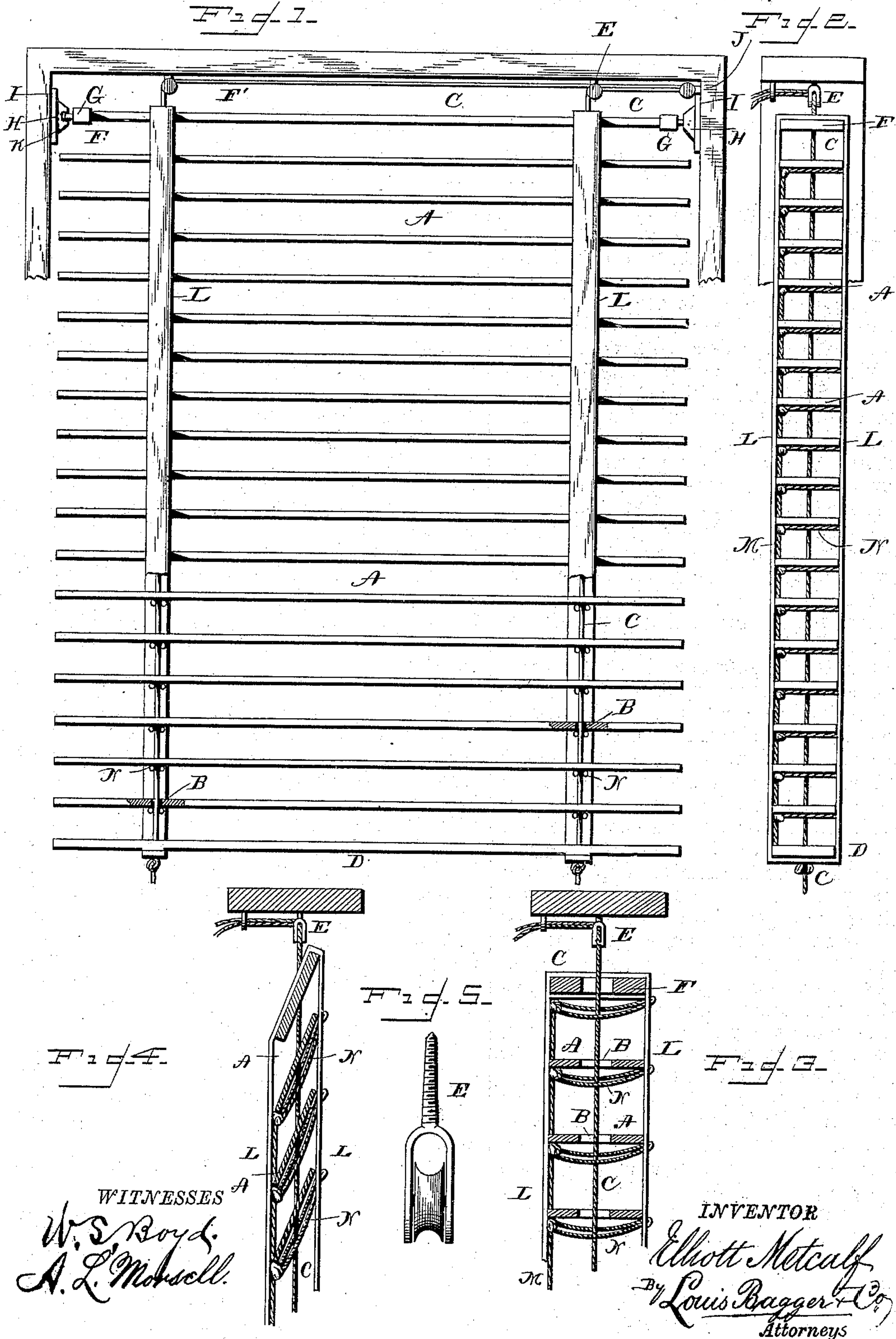
(No Model.)

E. METCALF.

WINDOW SHADE ATTACHMENT.

No. 331,150.

Patented Nov. 24, 1885.



UNITED STATES PATENT OFFICE.

ELLIOTT METCALF, OF CASS CITY, MICHIGAN.

WINDOW-SHADE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 331,150, dated November 24, 1885.

Application filed January 24, 1885. Serial No. 153,907. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT METCALF, a citizen of the United States, residing at Cass City, in the county of Tuscola and State of Michigan, have invented certain new and useful Improvements in Inside Blinds for Windows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view, with portions broken away, of my improved window-blind, showing a portion of the window-frame. Fig. 2 is an end view of the same. Figs. 3 and 4 are sectional detail views of the blind, showing it in two different positions; and Fig. 5 is a view of one of the pulleys.

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

My invention has relation to that class of inside blinds for windows in which a number of slats are drawn upon the hoisting-cords passing through perforations in the slats from the lower slat, so that by drawing the said cords the blind may be drawn up with the slats resting with their sides bearing against each other, and in which the slats are kept at equal distances by means of bands or cords passing down along the edges of the slats and across from one edge to the other, supporting the slats; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the slats, which are formed with transverse slots B near their ends, through which the hoisting-cords CC pass, which cords are secured at their lower ends to the lowermost slat, D, which is preferably thicker than the others, while their upper portions pass over pulleys E, secured into the window-frame, so that by drawing equally upon both cords the entire blind may be drawn up with the slats bearing against each other's sides. The upper slat, F, is thicker than the other slats, and its ends are inclosed in recessed casings or castings G, having trunnions H, which may

or castings I, one, J, of the said bearings being plain cylindrical, while the other bearing, K, is formed in the shape of a horizontal groove open at one end, into which groove one of the trunnions may be slid after the trunnion at the other end of the slat has been inserted into the cylindrical bearing, whereupon the first-mentioned trunnion may turn in the inner closed end of the groove. A pair of tapes or bands, L, are secured to the upper and lowermost of the slats, near their ends, and pass down at both sides of the blinds, and a cord, M, passes down one tape of each pair, and is secured thereto at regular intervals, preferably by sewing it through the tape. At each place where it is thus secured it is formed into a loop, N, the opposite end of which is secured to the opposite tape, preferably by sewing it through the tape. The loop is tied with a suitable knot, thus forming supports at regular intervals for the slats.

It will be seen that the slats will rest upon the transverse loops N when the blind is let down, and that all the slats will normally be in a plane parallel to the upper and lowermost slats; but the slats only being confined by the hoisting-cords, and having free space to be individually tilted into other planes, it will be seen that by either tilting the edges of a number of slats upward or downward, which may be accomplished by simply running the hand up or down over the edges of the slats, the slats may be tilted in a position different from the position of the remaining slats, allowing one part of the blind to be open, with the slats in horizontal planes, and the other part closed, or vice versa.

The planes of all the slats may be simultaneously changed at any angle by either tilting the upper or lower slat, which former will turn upon its trunnions, and by means of the tapes tilt all the slats.

The hoisting-cords operate in the usual manner, and need no further explanation.

I am aware that it is not new to have the slats in a blind of this class confined by means of tapes or bands passing down at both sides of the blind and having cross-bands separating the slats; and I am also aware that it is not new to have the hoisting-cords passing through the slats and secured to the bottom slat, and I do

not wish to make any claim for such constructions; but I am not aware that slats strung upon the hoisting-cords have been spaced by means of cords formed into loops secured at
5 both ends to the bands, which cord-loops allow each individual slat to be tilted in any desired position independent of the others; neither am I aware that the top slats of such blinds have been provided with casings at their ends formed
10 with trunnions which turn in bearings in the window-frame and allow the slats of the blind to be easily tilted at different angles without the use of cords or handles, but by simply tilting either the bottom or top slat, and
15 I therefore claim—

In an inside blind, the combination, with the slats strung upon a hoisting-cord and the tapes or bands secured to the top and bottom slats at both sides of the blind, of a cord passing down each pair of said tapes and secured to one of
20 said tapes at regular intervals and formed into loops and knotted, the opposite end of said loops being secured to the other one of said tapes, and means for supporting and operating said blind, substantially as and for the purpose
25 set forth.

ELLIOTT METCALF.

Witnesses:

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