(No Model.)

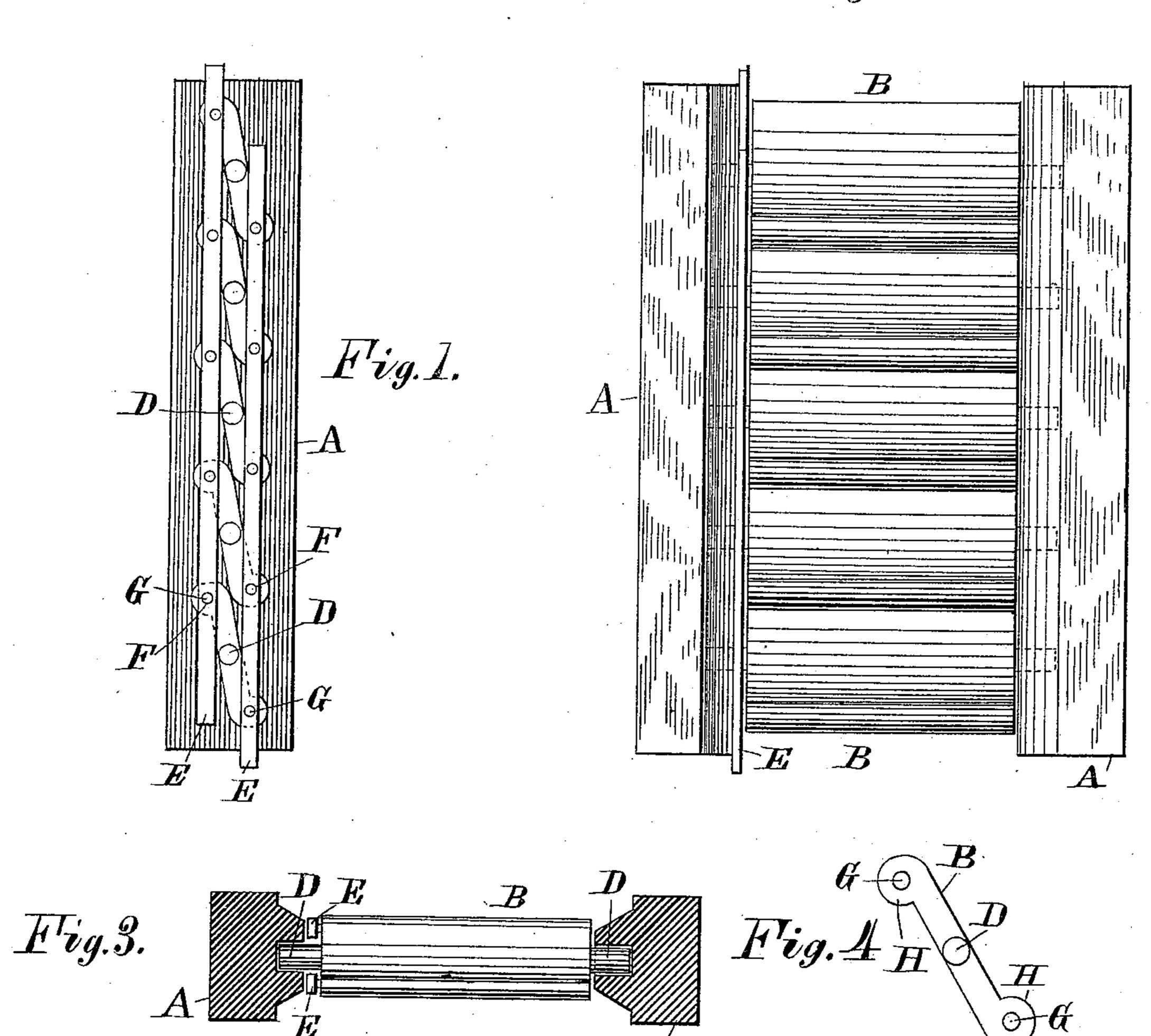
## H. E. WILLER.

#### WINDOW BLIND SLAT.

No. 312,051.

Patented Feb. 10, 1885.

Hig. 2.



Witnesses G.M. Gridley H.O. Dickson Henry E. Willer Inventor By Ermin VI Benedich Attorneys

# United States Patent Office.

## HENRY E. WILLER, OF MILWAUKEE, WISCONSIN.

### WINDOW-BLIND SLAT.

SPECIFICATION forming part of Letters Patent No. 312,051, dated February 10, 1885.

Application filed September 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, Henry E. Willer, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Window-Blind Slats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in devices for opening and closing the slats of window-blinds, and it is especially adapted to be used in that class of window-blinds which are formed in several sections, which sections, when opened and closed, move in close prox-

imity to each other.

My device is intended as a substitute for the slat-turning rods heretofore attached to the front edges of the slats, which rods, thus located in front of the slats, prevent the sections of the blinds to which they are attached from being arranged as closely to each other as desired.

The construction of my invention is further so explained by reference to the accompanying

drawings, in which-

Figure 1 represents a side view of one of the sections of blinds with one side of the frame removed, showing the manner of connecting the slats together. Fig. 2 is a front view of one of the sections. Fig. 3 is a horizontal section, and Fig. 4 is an end view of one of the slats removed from the frame.

Like parts are represented by the same ref-40 erence-letters throughout the several views.

A A represent the sides of the windowblind frame. B B are the series of blind-slats. D are the supporting-tenons of the slats, upon which they turn in the respective sides of the frame. E E are thin narrow strips of metal by which the series of slats are connected together and turned. The metal strips E E are provided with a series of perforations, F F, corresponding to the number of slats in the

series, through which small loosely-fitting 50 nails G are inserted and driven firmly into the ends of the slats, thus connecting each slat in the series at their respective edges, and, if desired, at their respective ends, with said slat-turning strips E. Each slat in the series B B is provided with beads or projecting flanges H H—one upon the inside and the other upon the outside thereof—arranged at diagonally-opposite corners, as shown in Fig. 4, which serve as a place of attachment for 60 said strips, and into which said nails G are driven.

It is obvious that when beads H H are thus formed upon the edges of the slats I am enabled to attach said strips E farther from the 65 central supporting-tenons, D, whereby when said slats are closed together, as shown in Fig. 1, said strips E E are prevented from coming in contact with said tenons D, as they otherwise would, and prevent the slats from 70 coming in close contact. When the strips E are thus attached to the series of slats, motion communicated to any slat in the series when opening or closing them will be simultaneously transmitted to all the other slats in 75 the series. The connecting-strips E thus interposed between the ends of the slats and blind-frame cannot, as it is obvious, in any manner prevent the several sections of blind from being moved in close proximity to each 80 other.

It is obvious that, if desired, a single connecting strip, E, may be used, instead of two, as shown. I however prefer to use two or more, as I am enabled thereby to use thinner 85 material in their construction, as in such case I do not depend upon the rigidity of the strips used, it being obvious that in moving the slats in either direction one or the other of the strips E draws the slats, while the other pushes them, 90 in which case very thin flexible material will serve as well as more rigid and heavy material for the purpose.

Having thus described my invention, what I claim as new, and desire to secure by Let- 95 ters Patent, is—

1. The series of blind-slats BB, provided on one side of one or both of their edges with

beads or projections H, in combination with one or more connecting side strips, E, and retaining-pins G, substantially as set forth.

2. The series of slats B B, respectively provided with beads or projections H H, arranged one upon the inside and one upon the outside of the slats diagonally opposite to each other, in combination with the strips E E and pins G, said beads or projections serving as places

of attachment for said strips, substantially as 10 and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY E. WILLER.

Witnesses:

C. T. BENEDICT, JAS. B. ERWIN.