(No Model.)

# A. P. HEIDT.

## WINDOW BLIND.

No. 456,306. Patented July 21, 1891.

Fig. 1.

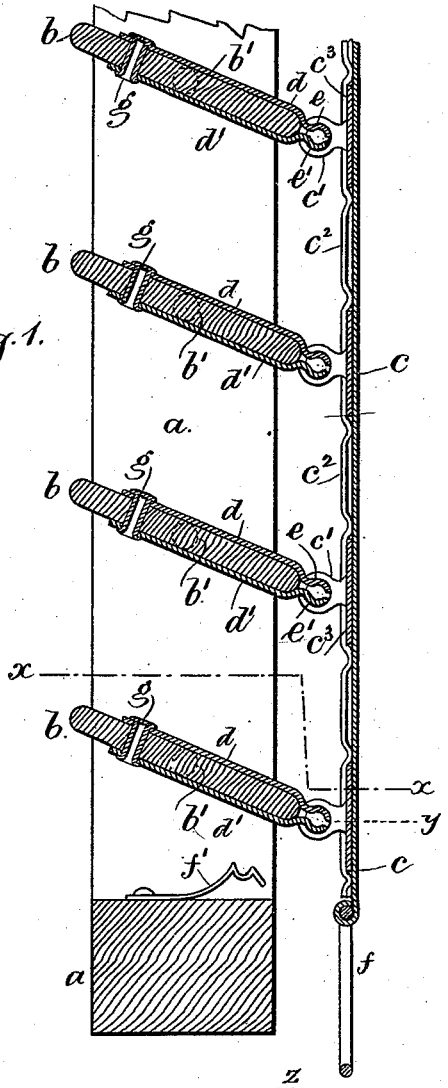



Fig. 6

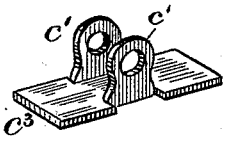



Fig. 2.

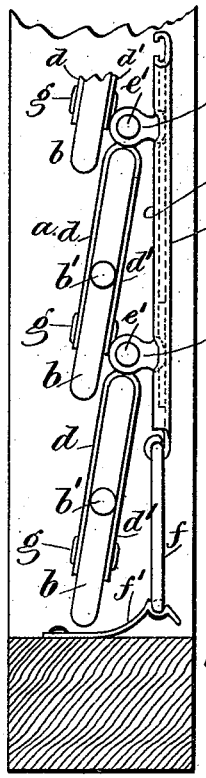



Fig. 3.

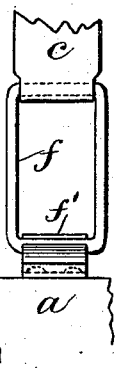



Fig. 4.

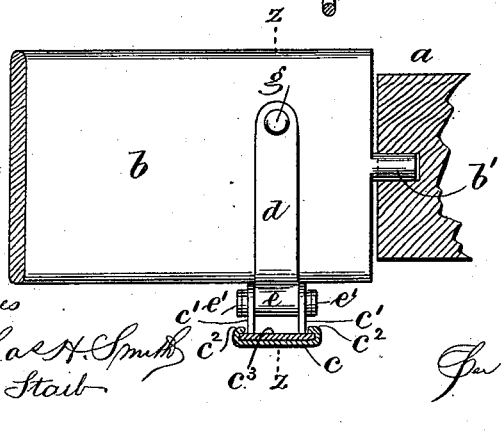
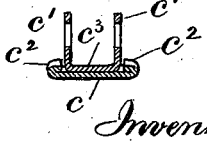



Fig. 5.




Witnesses
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# UNITED STATES PATENT OFFICE.

ALLEN P. HEIDT, OF NEW YORK, N. Y.

## WINDOW-BLIND.

SPECIFICATION forming part of Letters Patent No. 456,306, dated July 21, 1891.

Application filed October 23, 1890. Serial No. 369,004. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN P. HEIDT, a citizen of the United States, residing at the city, county, and State of New York, have invented an Improvement in Window-Blinds, of which the following is a specification.

My present invention is designed as an improvement upon the device shown and described in Letters Patent granted to me January 8, 1889, No. 395,902. Difficulties have been experienced with the device of my aforesaid patent, first, in the strap surrounding the blind-slats because of the great variations in the dimensions of the slats, and, second, in the bearings of the vertical bar, which bearings should lie at the same distance from center to center as the pivots of the slats, and as said slat-pivots not only varied in different blinds, but were uneven in the same blind, it was impossible to make bars to fit slats in use, and the object of my present invention is to overcome these difficulties.

In carrying out my invention I employ two part straps of metal connected by rivets to the blind-slats and having half pivots or pivotal jaw ends which come together and are received into the bearings of the vertical bar, and said vertical bar has bent-over edges, forming a slideway, and the bearings for the slats are each made with a plate adapted to slide in the vertical bar and to be clamped at the desired place by bending down the edges of said bar against said plate. These features of improvement make it possible to secure my straps and bars to any window-blinds.

In the drawings, Figure 1 is a vertical section of part of a window-blind as open and having my improvements. Fig. 2 is an edge view showing the slats closed. Fig. 3 is an elevation of the device for holding the slats closed. Fig. 4 is a sectional plan at the line $x\,x$ of Fig. 1. Fig. 5 is a section at the line $y$ through the vertical bar, and Fig. 6 is a perspective view of one of the pivot-bearing plates.

$a$ represents the blind-frame at one side, $b$ the wooden slats, and $b'$ their pivotal ends.

$c$ represents the vertical metal bar by which the slats are moved. This bar $c$ is composed of a metal strip having bent-over edges $c^2$, which form a slideway upon one side of the bar, and these edges $c^2$, hereinafter more fully described, stiffen the bar.

Each bearing or pivot $c'$ is of sheet metal, formed with a plate $c^3$, which plate is longer and wider than the bearings and of a width to slide or move endwise in the slideway upon one face of the bar $c$, and said bearings or pivots consist of perforated ears bent up to receive the pivotal jaw ends of the slat-straps. Each plate $c^3$ is secured in and to the bar $c$ by bending down the bent edges $c^2$ of said bar. This can be done either, as shown in Fig. 1, by bending down the edges of the bar $c$ at the respective ends of the plates $c^3$, or, as shown in Fig. 2, by bending down the edges $c^2$ at the central notches formed in turning up the bearings $c'$. The plates $c^3$ are secured in place upon the bar $c$ after the bearings and plates are located in the vertical bar, in position corresponding with the pivotal centers $b'$ of the wooden slats $b$. This endwise movement of the plates $c^3$ is necessary to provide for the difference in the pivotal centers of various blind-slats, as my improvements are applicable to any blind-slats in use. The lower end of the vertical metal bar $c$ is turned up to form an eye, and I provide an oblong wire ring $f$, passing through this eye, and which ring is adapted to be grasped to raise and lower the vertical bar in operating the slats $b$, and I provide a spring-plate $f'$, or an equivalent device, connected to the lower part of the shutter-frame, which is adapted to engage the lower end of the ring $f$ to hold the slats closed, as shown in Figs. 2 and 3.

Instead of the complete straps, as in my aforesaid patent, to encircle the wooden slats $b$, I employ two part metal straps $d\,d'$, which are secured and held upon opposite surfaces of the slats $b$ by the solid or hollow tubular rivets $g$, which pass through holes in the straps and holes in the slats. The free ends of the straps are made with half-pivots or pivotal jaw ends $e\,e'$, which ends are sectionally nearly half-circles, and are longer from end to end than the width of the straps. These half-pivots or jaw ends $e\,e'$ are adapted to be received in perforated ear-bearings $c'$ of the vertical bar $c$ to form pivotal connections. These half-pivots or jaw ends are like those set forth in my aforesaid patent, and when free from the bearings $c'$ they do not come

together, but they are brought together and inserted into the bearings as the perforated ears forming such bearings $c'$ are bent toward each other. When in place, the jaw ends have a tendency to spring apart, and consequently produce a friction in the bearings, which serves to hold the slats in place. The straps $d$ $d'$ are shorter in length than the width of the slats, and are therefore capable of being connected by their rivets to slats of any width, and the vertical bars $c$ and the plates and bearings are by their special construction adapted to be used with slats whose pivotal ends vary from center to center in the same blind and also vary in blinds and slats of various sizes.

I claim as my invention—

1. The combination, with a vertical bar having bearings, of the two-part straps $d$ $d'$, the rivets $g$ for securing said straps in place, and the half-pivots or pivotal jaw ends $e$ $e'$, substantially as set forth.

2. The combination, with straps adapted to be secured to blinds and having pivot ends, of a vertical bar $c$, having turned-over edges $c^2$, and a plate $c^3$, having bearings $c'$ and adapted to be connected to the bar $c$, substantially as set forth.

3. The combination, with the slats and the straps therewith connected, of separate plates, pivotal connections between the straps and plates, a longitudinal bar receiving the plates and on which they are adjustable, and means for securing the plates to the bar, substantially as specified.

4. The combination, with the two-part straps $d$ $d'$, their rivets $g$, and pivotal jaw ends $e$ $e'$, of the vertical bar $c$, having turned-over edges $c^2$, the plate $c^3$, and bearings $c'$, substantially as set forth.

5. The combination, with the blind-slats and the straps connected therewith and having pivot ends, of a bar having a slideway or groove on one face, plates having turned-up ears or bearings and movable lengthwise in the groove of said bar, so as to be adjusted to correspond with the distances between the pivotal centers of the blind-slats, and means for securing said plates in the groove of the bar, substantially as specified.

6. The combination, with the blind-slats, the straps connected therewith, and the pivotal connections at the ends of the straps, of the metal bar $c$, having bearings for the pivotal connections of the straps and having an eye turned up at its lower end, the wire ring $f$, passing through the eye of the bar $c$, and the spring-plate $f'$, substantially as and for the purposes set forth.

Signed by me this 20th day of October, A. D. 1890.

A. P. HEIDT.

Witnesses:
GEO. T. PINCKNEY,
HAROLD SERRELL.