H. A. WILBUR.

Pulley for Window-Sash.

No. 209,997. Patented Nov. 19, 1878.

Fig. 1.

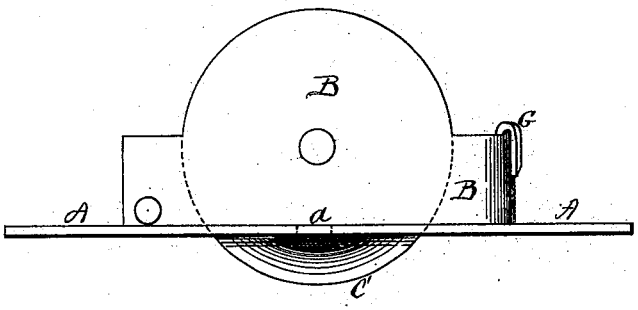


Fig. 2.

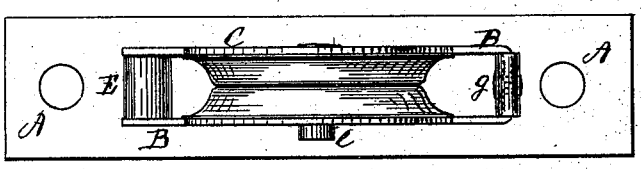


Fig. 3.

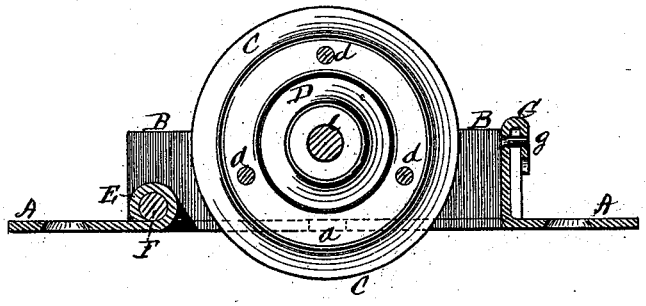
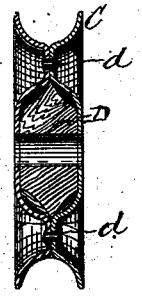


Fig. 4.



Witnesses.

L. H. Latimer.

R. D. Washburn

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H. A. Wilbur

by J. N. Adams Atty

UNITED STATES PATENT OFFICE.

HENRY A. WILBUR, OF SOMERVILLE, ASSIGNOR TO BENJAMIN D. WASHBURN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PULLEYS FOR WINDOW-SASHES.

Specification forming part of Letters Patent No. **209,997**, dated November 19, 1878; application filed March 11, 1878.

To all whom it may concern:

Be it known that I, HENRY A. WILBUR, of Somerville, in the county of Middlesex and State of Massachusetts, have invented an Improved Window-Sash Pulley, of which the following is a specification:

My invention relates to that class of pulleys which are used in connection with window frames and sashes; and it consists in the method of attaching the side pieces which constitute the casing for the pulley to the face-plate.

The invention also consists in the interposition, between the two wrought-metal disks or plates that constitute the pulley-wheel, of a filling consisting of wood, hard rubber, iron, glass, or other suitable substance, for the purpose of giving a full bearing to the wheel on the axis or spindle on which the wheel is mounted.

Referring to the drawings, Figure 1 represents a side elevation of a window-sash pulley embodying my improvements. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal section, and Fig. 4 is a section of the pulley-wheel.

A is the face-plate, to be made of brass or other metal. B is the casing, and consists of two plates or disks of wrought sheet metal, the upper portion conforming to the contour of the pulley, and the ends attached to each other by means of a strip of metal cut out from the center of the face-plate and turned up over a rivet, F, as shown in Figs. 2 and 3. The rivet F connects the ends of the side pieces together.

The side pieces B B may be further connected to the face-plate A by means of tangs or projections (shown in dotted lines at *a*, Figs. 1 and 3) formed on the lower edges of the side pieces of the casing. They pass through holes in the face-plate and are riveted to the same.

The pulley-wheel C is composed of two sheet-metal plates or disks struck up in a die and joined together by means of rivets *d*, as shown in Figs. 3 and 4. As thus constructed the edges of the holes through which the spindle passes are liable to cut or wear the latter, and in order to obviate this difficulty I interpose between the two disks, at the central portion, a block or filling, D, consisting of wood, hard rubber, metal, glass, or other suitable material, as shown in Figs. 3 and 4, by which a full bearing is attained.

I do not claim the pulley made of sheet-metal plates, as I am aware that is not new.

I am aware that a pulley of thin metal, in two pieces, having a central wearing-block, is not new, and do not, therefore, desire to be understood as making a broad claim herein to such construction. In the present form the block is secured between the two plates, thereby enabling me to make the block in a single piece, and at comparatively trifling expense.

I am also aware of the common custom of riveting two plates together by means of projections upon one plate which enter slots cut in the other.

What I claim as my invention is—

1. In a sash-pulley, the combination of face-plate A, side pieces B B, which support the wheel, rivet F, and the strip E, cut from the face-plate and attached to said rivet, substantially as shown and described.

2. In a sash-cord guide, the combination, with the two thin metal plates comprising the wheel, and riveted together, as explained, the wearing-block D, confined within a recess formed by bending said plates, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY A. WILBUR.

Witnesses:

J. H. ADAMS,

THOMAS LALLY.