

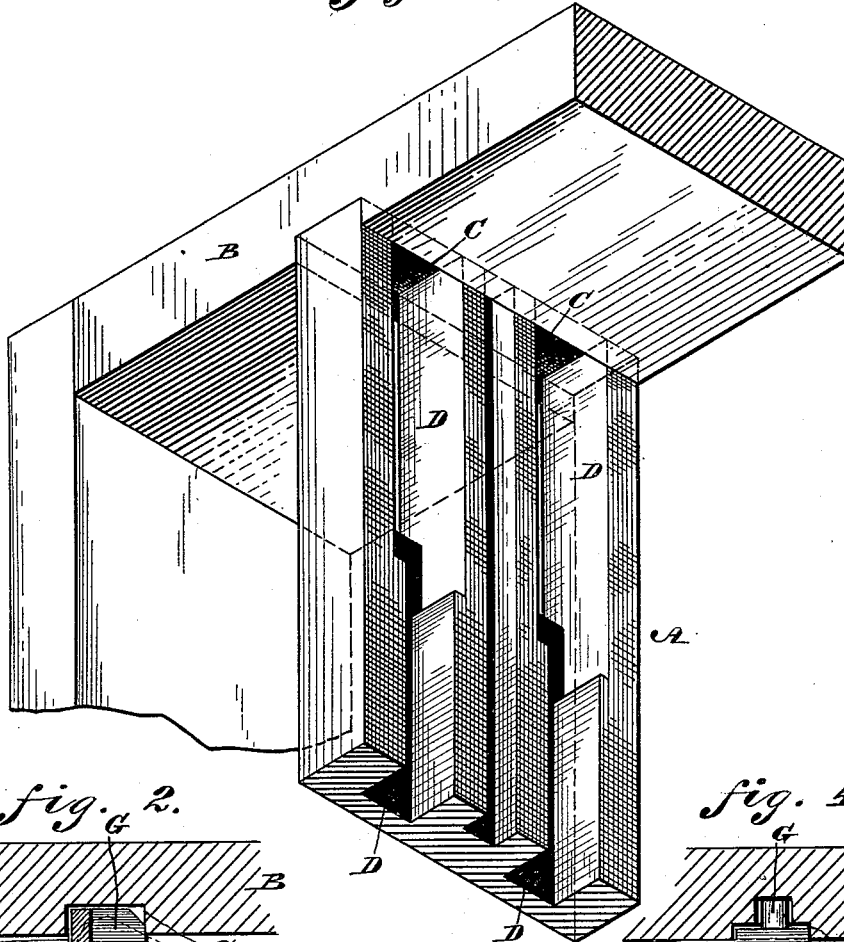
(No Model.)

W. W. RICHARDS.  
SASH CORD PULLEY.

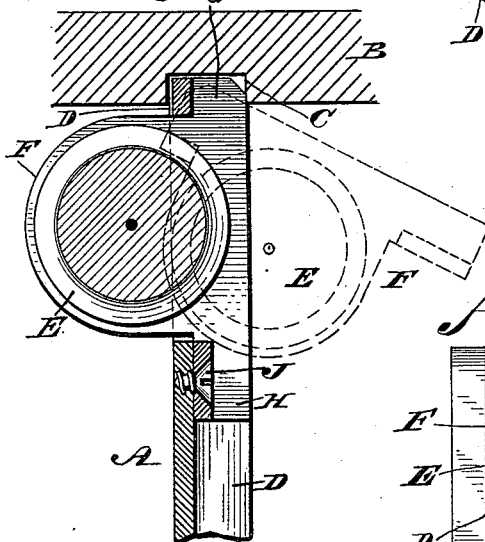
No. 419,474.

Patented Jan. 14, 1890.

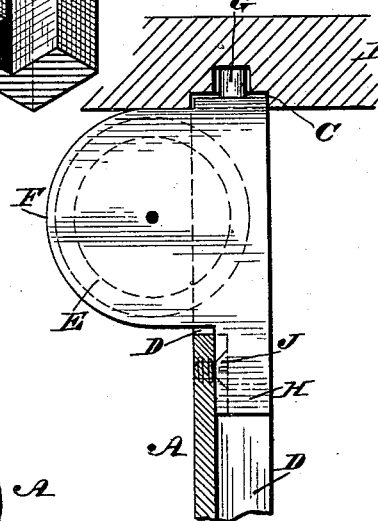
*fig. 1.*



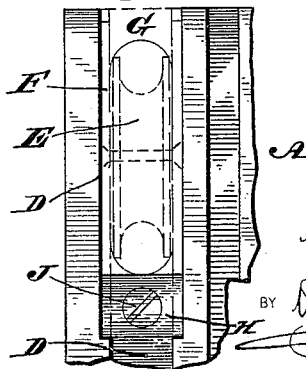
*fig. 2.*



*fig. 3.*



*fig. 4.*



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WALTER W. RICHARDS, OF PHILADELPHIA, PENNSYLVANIA.

## SASH-CORD PULLEY.

SPECIFICATION forming part of Letters Patent No. 419,474, dated January 14, 1890.

Application filed March 18, 1889. Serial No. 303,669. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER W. RICHARDS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Sash-Pulleys, which improvement is fully set forth in the following specification and accompanying drawings.

The invention consists in forming the box or frame of a sash-pulley in such manner that it engages or interlocks with the cross-head or cap of the window-frame and may be secured to the pulley-stile by a single-screw.

Figure 1 represents a portion of a window-frame to which my invention is applied. Figs. 2 and 4 represent side elevations of a sash-pulley embodying my invention. Fig. 3 represents a face view of the sash-pulley and adjacent portions of the window-frame.

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

Referring to the drawings, A designates one of the side or pulley stiles of a window-frame, and B designates the cross-head or cap thereof. On the under side of the cap adjacent to the place of connection of the stile A therewith are grooves C, which are in communication with the grooves D in said stile, said grooves D being designed for the passage of the knots or fastening devices of the sash-cords.

E designates a sash-pulley whose box F is fitted into either of the grooves D and secured to the walls thereof, it being noticed that said box has an upwardly-projecting portion G

and downwardly-projecting portion H. The portion G enters either of the grooves C, and the portion H is secured to the back wall of the groove by means of a screw J, which passes through an opening in the portion H. It will be seen that as the bottom of the box is screwed to the side stile the top of the same is interlocked with the cap B, owing to the projection of the portion G of the box into the groove C of said cap. By this provision the pulley is connected with the window-frame in a reliable, convenient, and inexpensive manner, and only a single screw is necessarily employed as a means of fastening.

When the screw is removed, the pulley may be displaced, as is evident. When the projection G is fitted into the proper groove C and the pulley moved into the proper groove D, the screw is applied, and thus the pulley is again secured in position.

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

A side stile with a vertical groove, a cross-head or cap with groove on its under face, and a pulley box or frame with projection adapted to engage in said groove or under face of the cap, and a projection adapted to be secured in said vertical groove of the stile, said parts being combined substantially as described.

WALTER W. RICHARDS.

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