

W. SHAW.
Sash-Cord Guides.

No. 138,944.

Patented May 13, 1873.

Fig. 1

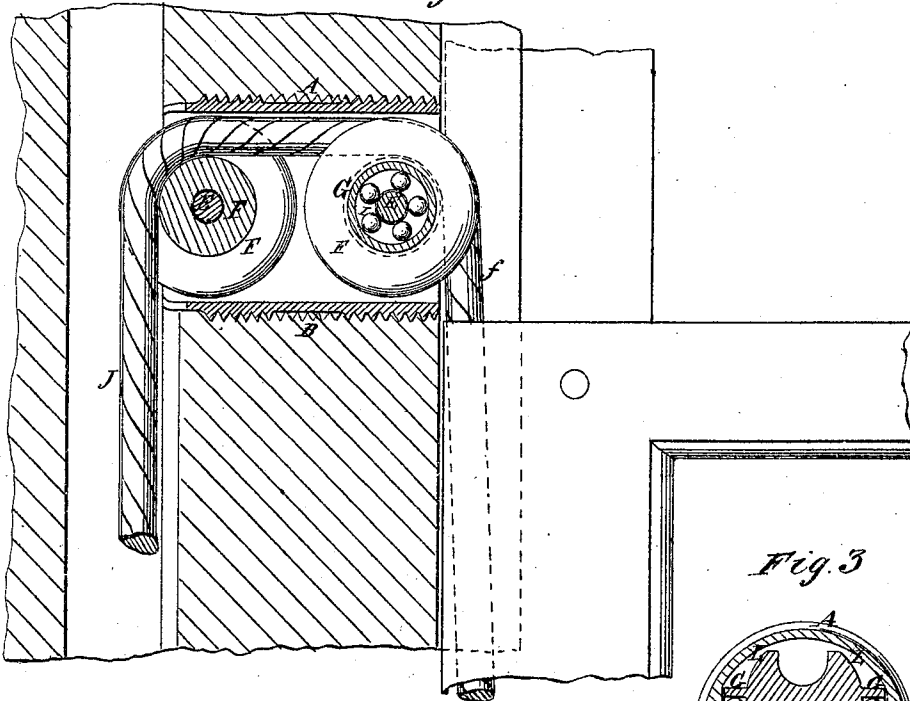


Fig. 2

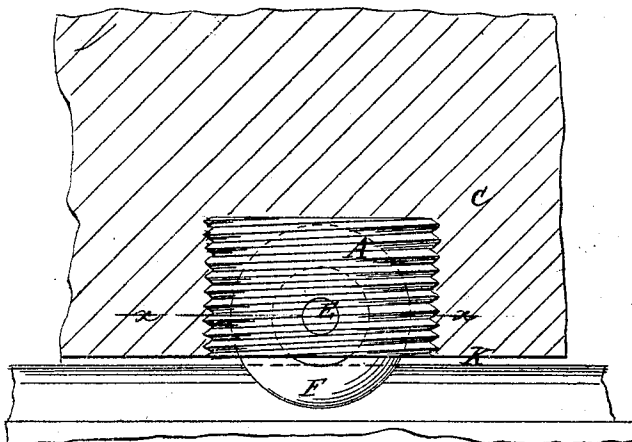


Fig. 3

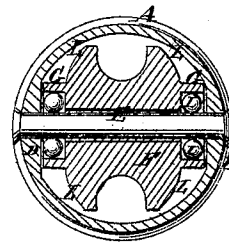
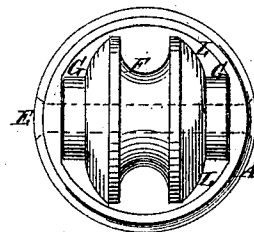


Fig. 4



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM SHAW, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SASH-CORD GUIDES.

Specification forming part of Letters Patent No. **138,944**, dated May 13, 1873; application filed March 22, 1873.

To all whom it may concern:

Be it known that I, WILLIAM SHAW, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Sash-Cord Guide; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification.

The invention consists in constructing the inside of a sash-pulley case and the ends of the pulley itself so that loose balls may be applied about the shaft, as hereinafter described and pointed out in the claim.

Figure 1 is a sectional elevation, showing sash, pulley, case, and cord. Fig. 2 is a sectional elevation of part of a sliding door. Fig. 3 is a cross-section of Fig. 2 on the line *x x*. Fig. 4 is an end elevation of the sheave.

A represents a short tubular case, screwed into a window-frame, B, or a door, C. D represents flat surfaces on opposite sides of the interior, and E the shaft on which the pulleys F are arranged. G represents end chambers in the rollers, and I little anti-friction metal balls placed in the chambers around the rods E to take the pressure of the rollers and lessen the friction. The rods E are riveted and made fast at the ends to the case A. The rollers will project at the end of the case, as

shown in Figs. 1 and 2, for the sash-cord J, on the rail K of a sliding door, to clear the case. The pulleys F are curved at L to narrow them at the edges, to clear the wall of the tube and remove surplus metal. The balls will be made of hard iron or steel.

For a sash-pulley two rollers will be used, as represented in Fig. 1, if the frame B be of sufficient thickness to require it, but one will do if the frame is not so thick. The case will extend through the frame, from the front side to the chamber behind, for the sash weight.

For a door-sheave a short case, with the roller projecting from one end only, will be screwed up into a hole in the bottom, as shown in Fig. 2.

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

The case A having flat surfaces D in which are journaled the rod or pulley-shaft E, and the rollers or pulleys F having end chambers G G, combined with sets of loose balls placed in said end chambers, as and for the purpose described.

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Witnesses:

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