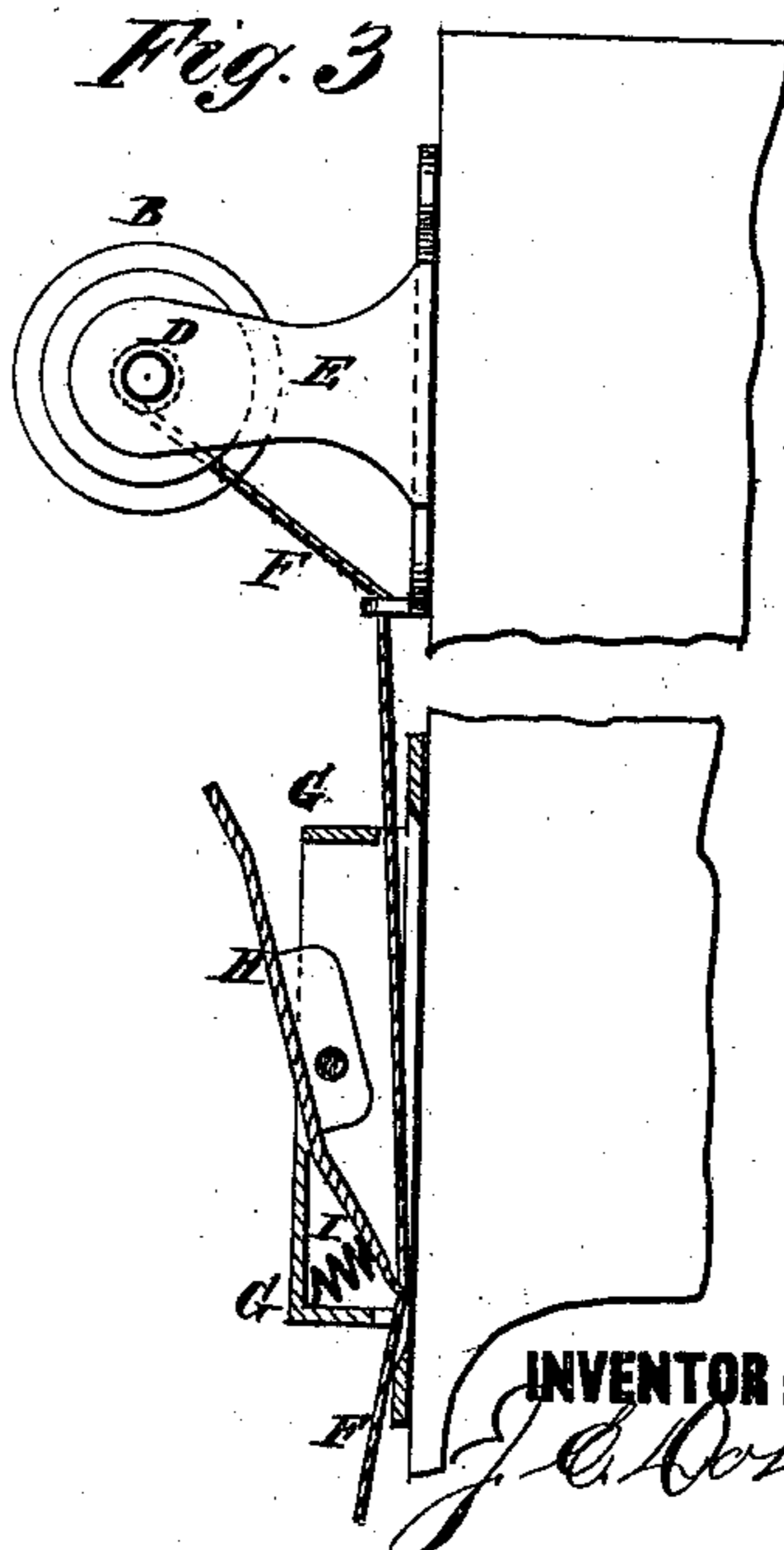
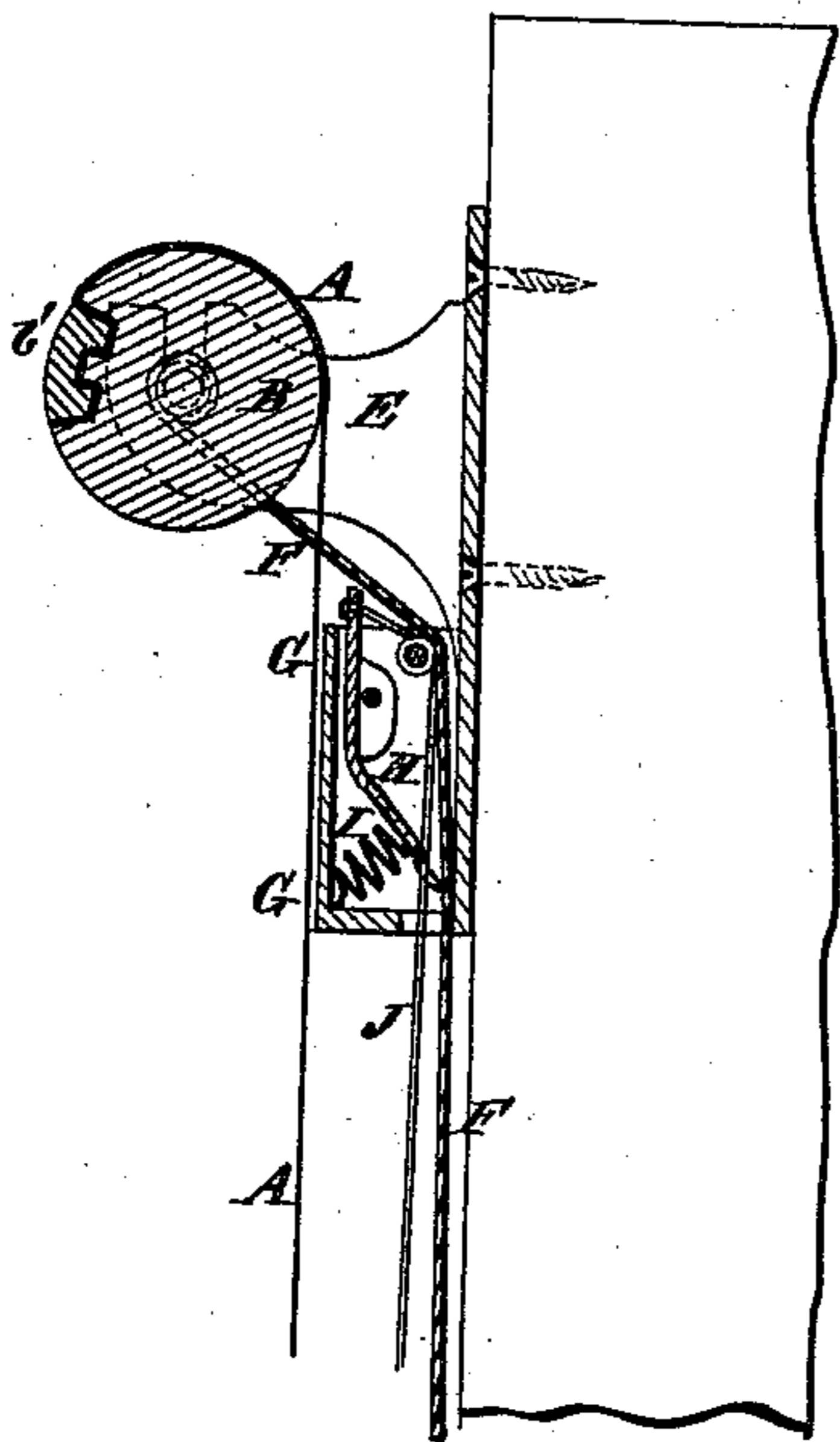


WINDOW-SHADE FIXTURES.

Patented May 16, 1876

**INVENTOR:**

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN E. DOHEN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN WINDOW-SHADE FIXTURES.

Specification forming part of Letters Patent No. **177,482**, dated May 16, 1876; application filed February 14, 1876.

To all whom it may concern:

Be it known that I, JOHN E. DOHEN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Window-Shade Fixtures, of which the following is a specification:

Figure 1 is a front view of my improved fixtures, shown as applied to a window, part being broken away to show the construction. Fig. 2 is a detail section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention consists in combining a tongue-grooved roller, a grooved key, and slotted caps, having pivots, as hereinafter more particularly described.

A is the shade, in the lower end of which is placed a bar of sufficient weight to hold the shade straight and smooth, and to unroll it when released. The upper end of the shade A is placed in a longitudinal groove in the roller B, where it is secured by a key, *b'*, fitted into the said groove. The key *b'* has a longitudinal groove formed in its under side to fit upon a tongue of the roller B in the bottom of its groove, as shown in Fig. 2. The key *b'* is held in place, clamping the end of the shade

A, by two tubular caps, C, placed upon the ends of the roller B *b'*, and in the sides of which, opposite the edges of the key *b'*, are formed slots *c'*, for the edge of the shade A to pass through.

In the case of large and heavy shades the end of the shade may project through the second slots *c'* to give the key *b'* a firmer hold upon it.

To the caps C are attached pivots D, which work in brackets E, attached to the window-casing, and to which, or to a pulley attached to them, is secured, and around it is wound, the cord F. The cord F passes down through a hole in a small case, G.

I am aware that a shade has been clamped between the flat surfaces of roller-sections, folded around the outside of one section, and secured by means of clamps; also, that a grooved roller, strip, and end caps are not new for securing shades; but

What I claim is—

The combination of roller B, having tongued groove, the grooved key *b'*, and the slotted caps, having pivots D, as and for the purpose specified.

JOHN E. DOHEN.

Witnesses:

JAMES T. GRAHAM,
T. B. MOSHER.