

J. C. LAKE.  
Curtain-Fixture.

No. 198,123.

Patented Dec. 11, 1877

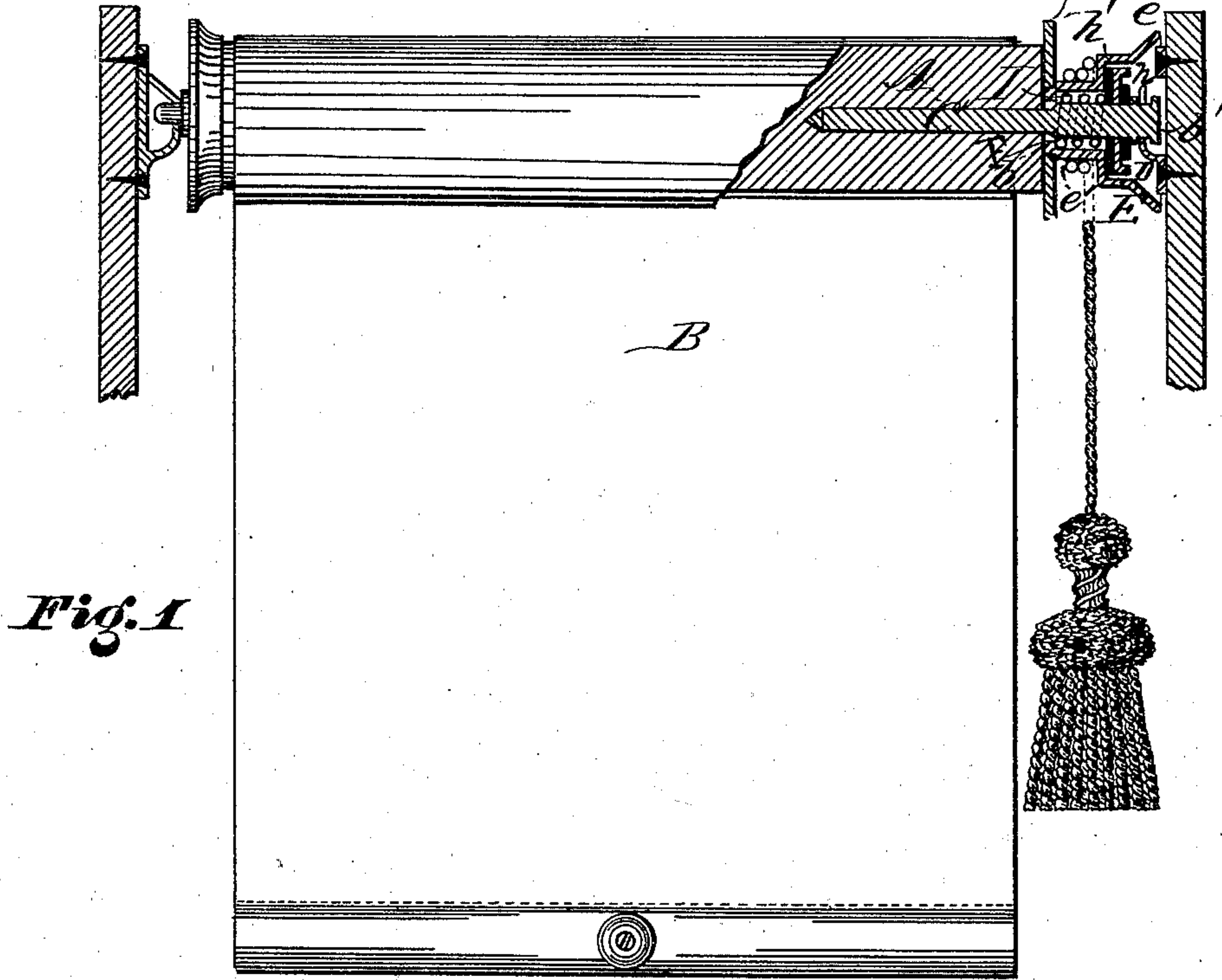


Fig. 1

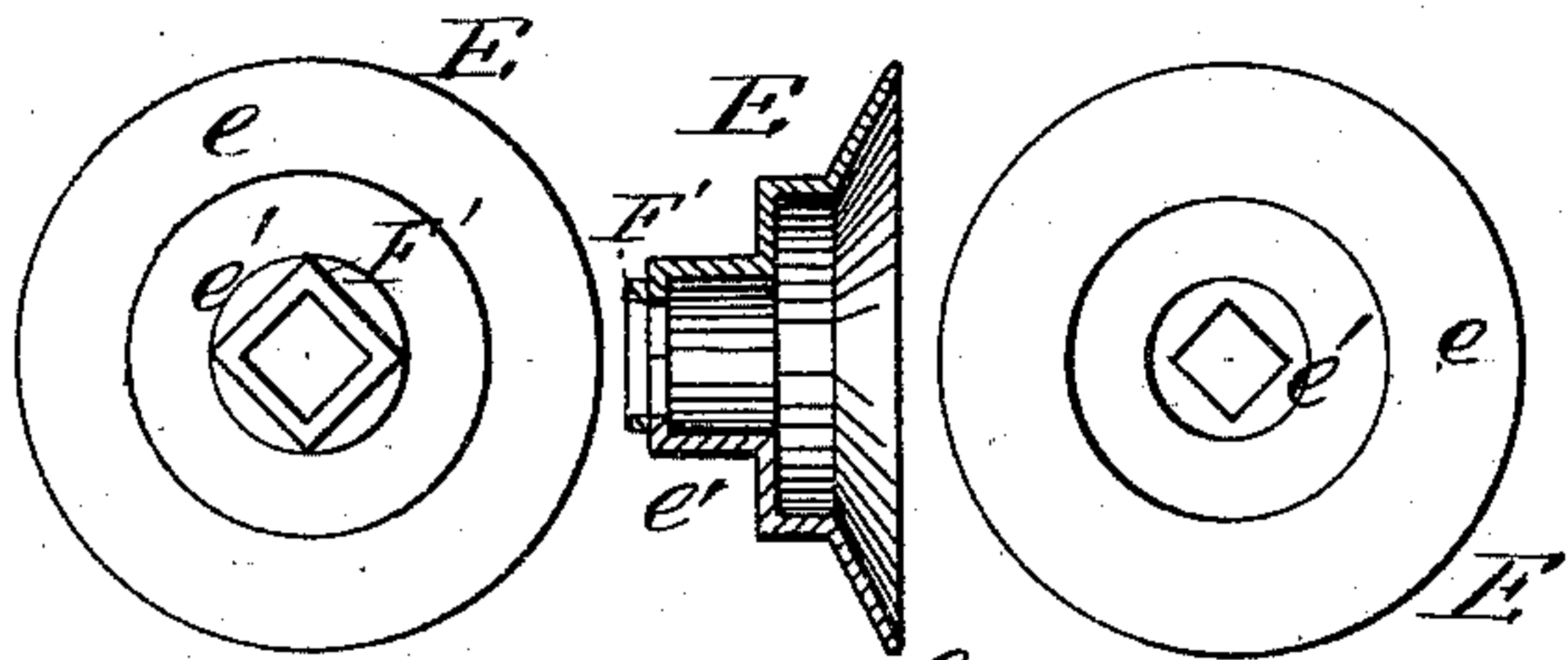


Fig. 2

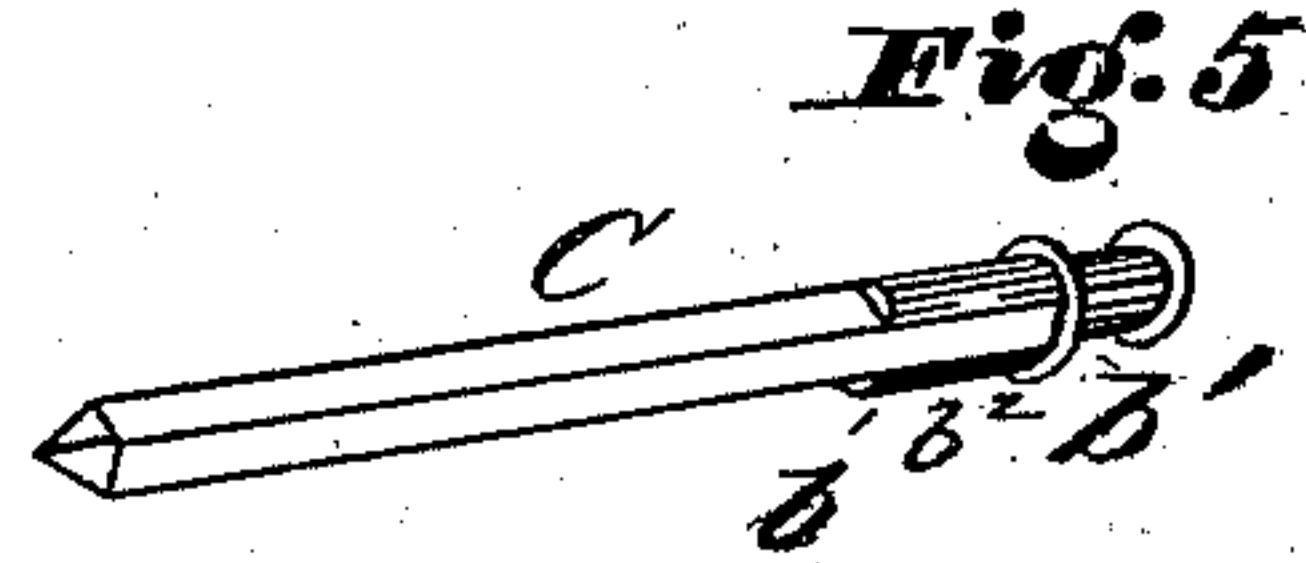


Fig. 5

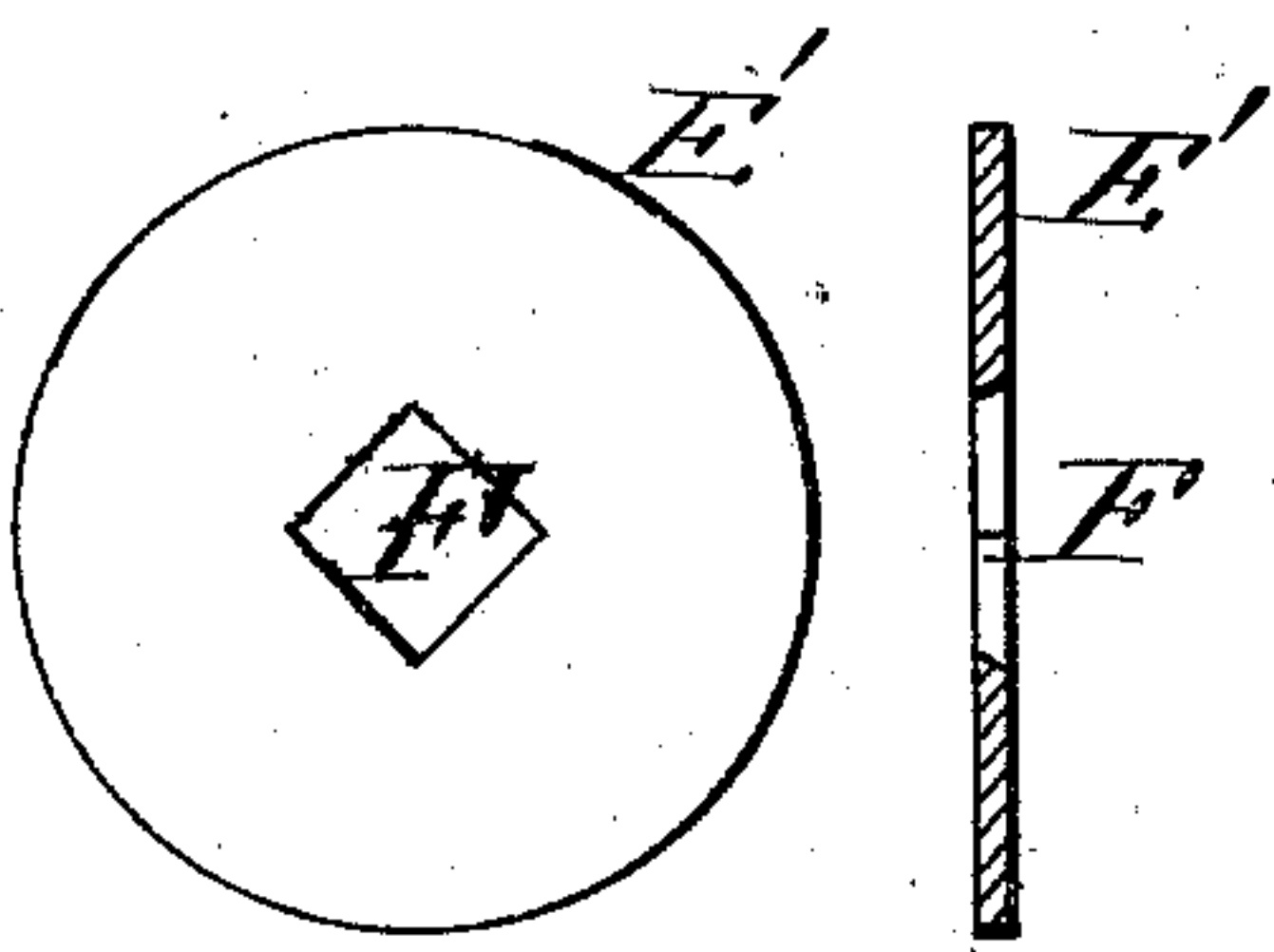


Fig. 3

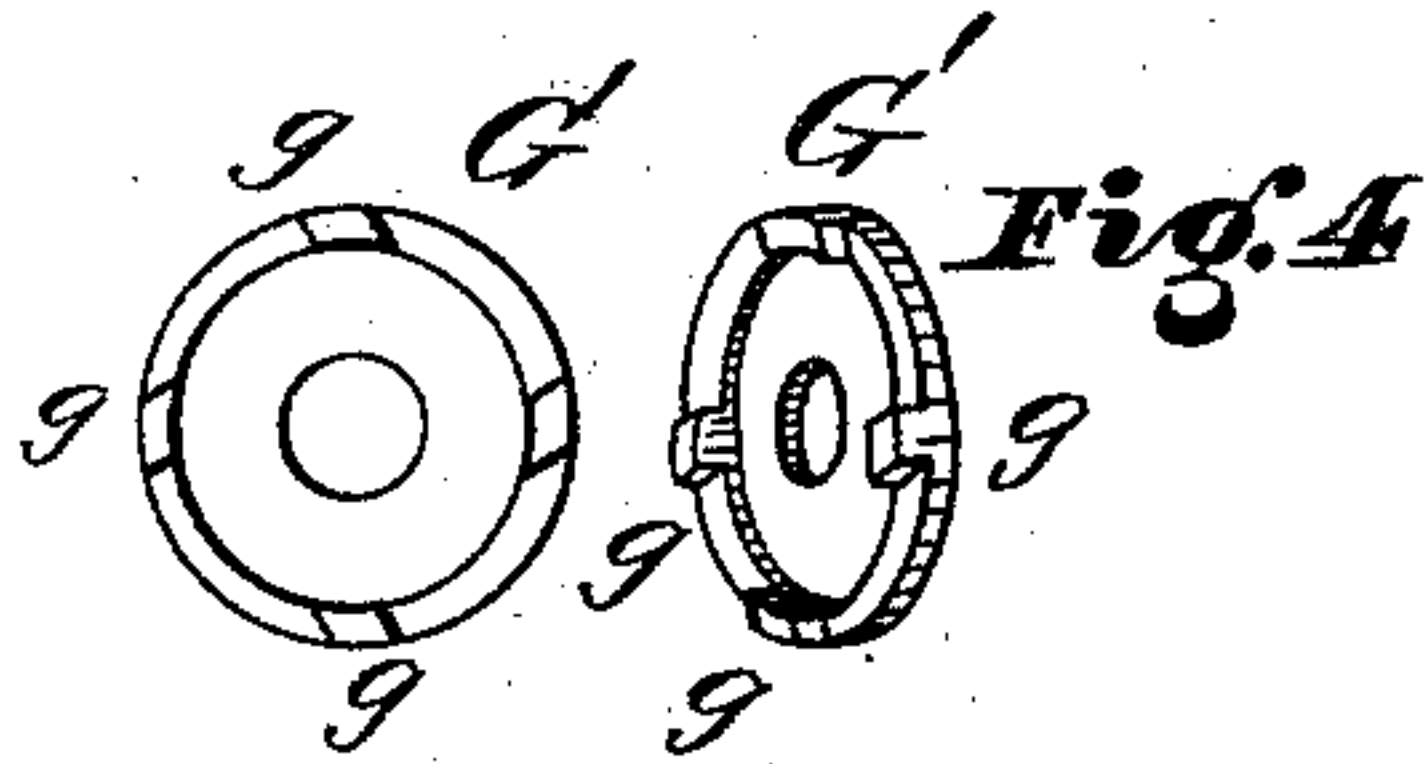


Fig. 4



Fig. 7

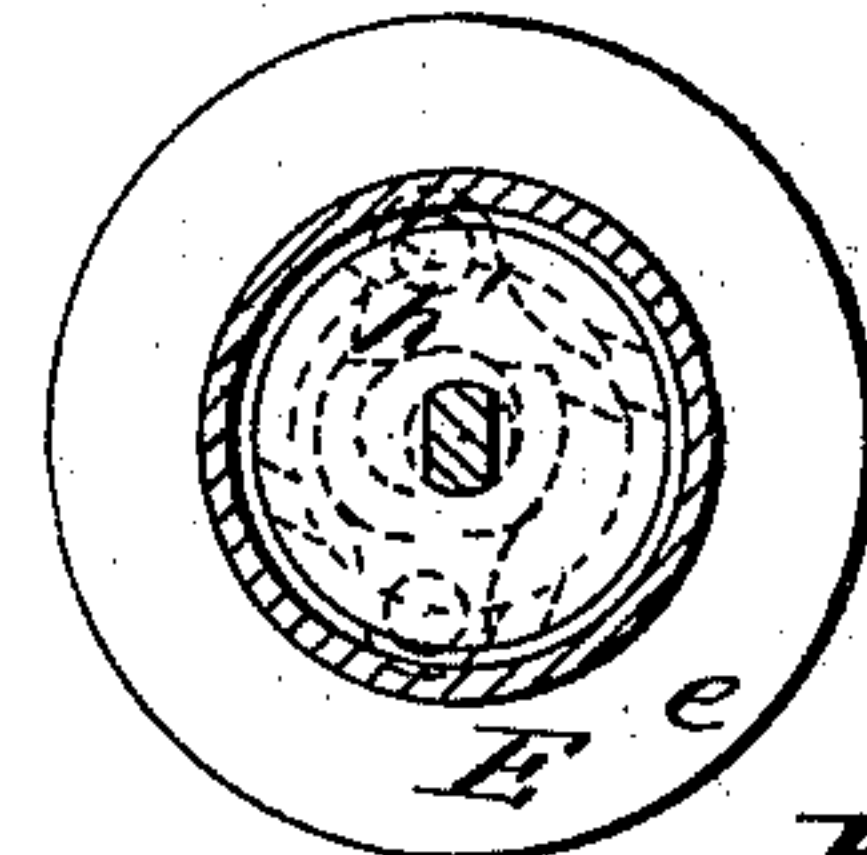
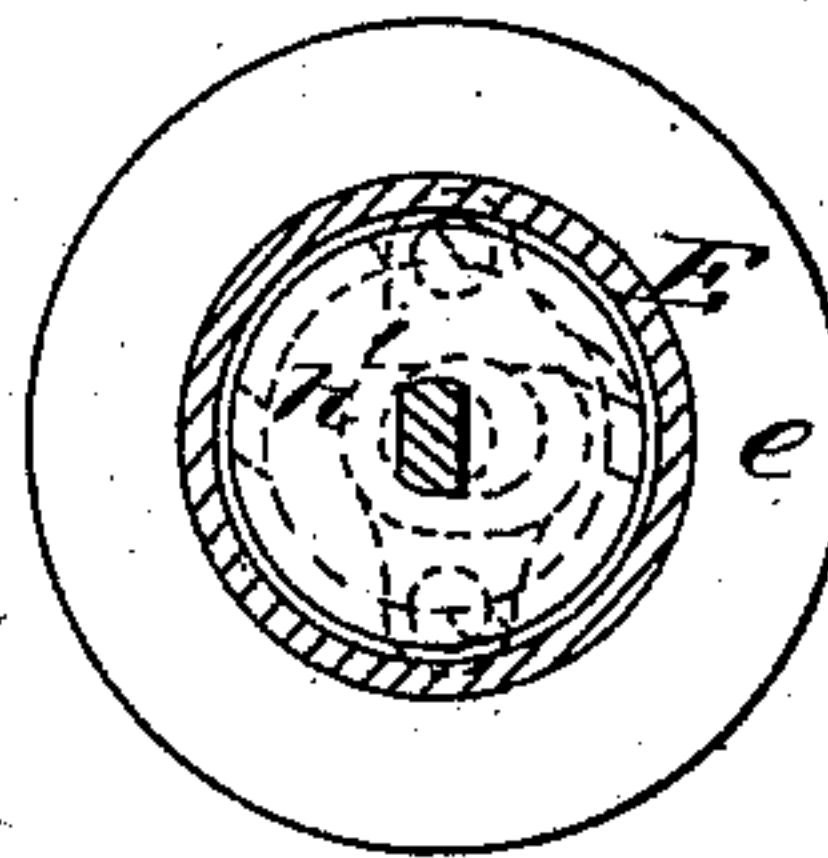


Fig. 6



Witnesses  
Saml. J. Way Storer  
Jos. B. Connolly

J. C. Lake  
Connolly  
Inventor  
Attorneys



# UNITED STATES PATENT OFFICE.

J. CHRISTOPHER LAKE, OF CAMDEN, NEW JERSEY.

## IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **198,123**, dated December 11, 1877; application filed June 11, 1877.

*To all whom it may concern:*

Be it known that I, J. CHRISTOPHER LAKE, of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Curtain-Fixtures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a face view of the shade and fixtures, the latter being in section. Figs. 2, 3, 4, 5, and 7 are detail views; and Fig. 6 is a transverse vertical section.

This invention has relation to window-curtain fixtures; and consists in the novel construction, arrangement, and combination of devices for effecting frictional resistance of parts connected with the roller-shaft and single-cord pulley, whereby, when the brake or ratchet is engaged by the stop on the bracket, the curtain may be pulled down by hand, but is prevented from falling or unrolling accidentally, as hereinafter described and claimed.

Referring to the drawings, A designates the curtain-roller; B, the curtain or shade, and C, the shaft. Said shaft has a square shank, which is driven into the end of, and thereby firmly secured to, the roller. Beyond this shank it is enlarged in thickness and shouldered, as shown at *b*, and terminates in a grooved head, *b*<sup>1</sup>, which is adapted to fit into an oval bearing, *b*<sup>2</sup>, formed in the bracket D, which is attached to the inner side of the window-frame. The roller and shaft rotate together. The frictional resistance is obtained through the cord-pulley and attachments.

The cord-pulley consists of the cup E having the flaring rim *e* and chambered neck *e'*, and the plate or disk E'.

The disk E' has a square central aperture, F, which receives a corresponding ridge or flange, F', on the neck *e'*, so as to hold the two parts of the pulley together. The shaft passes through the center of the pulley and is prevented from going too far into the roller by the shoulder *b*, which abuts against the

base of the neck *e'*, and leaves enough of the shaft projecting to receive the frictional devices comprising the disks *h h'*, ratchet G', and spring I.

G is a stop-projection on the bracket D, projecting forward and laterally, and G' is a studded or ratchet wheel which engages with this stop to arrest the motion of the roller when the cord is released or slackened. This ratchet-wheel is cup-shaped. The studs *g* project laterally from its rim. It has a central aperture, through which the shaft passes and fits the cavity of the pulley.

*h h'* are metallic washers placed on the shaft, respectively in front of and behind the ratchet. The shaft turns independently of the ratchet, when the latter is held by the stop on the bracket; but the washers turn with the shaft and serve as means for the application of the frictional resistance. This resistance is obtained from a spring, I, coiled upon the shaft, and located within the neck-cavity of the pulley behind the washer *h'*, so as to bear against the latter. The cord encircles the neck of the pulley.

The operation is as follows: The cord is wound in the usual way by pulling down the curtain. At this time the ratchet is held by the stop on the bracket, and the frictional resistance is felt. This frictional contact and the resistance thereby induced prevents the roller from turning too freely, or by accident, but permits it to turn when it is desired to draw the curtain down.

Now, to raise the curtain, the cord is pulled and the motion of the pulley reversed. At the same time the shaft is moved forward in its bearing, so that the ratchet clears the stop. When the cord is let go the tendency of the curtain to unwind and turn the roller and shaft throws the shaft backward, causing the ratchet to re-engage with the stop.

The advantages of this contrivance in points of simplicity, effectiveness, and cheapness are too obvious to require comment.

It is to be observed, as matters of detail, that the studs *g* are made oblique on one side, so as to insure their catching on the stop when the ratchet is thrown forward; also that the flaring rim *e* of the pulley forms

a shield to protect and conceal the bracket D and the delicate plates *h h'* and ratchet G'.

What I claim is—

The combination, with the stop-bracket D, the recessed pulley E, and the brake or frictional devices contained therein, of the ratchet-wheel G', contained between the disks *h h'*, and having the laterally-projecting studs *g g* at right angles with the plane of its face, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of May, 1877.

J. CHRISTOPHER LAKE.

Witnesses:

GEO. C. SHELMERDINE,  
SAML. J. VAN STAVOREN.