E. M. JUDD.

Curtain-Fixture.

No. 162,564. Patented April 27, 1875.

FIG. 2.

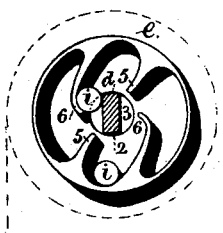

FIG. 3.

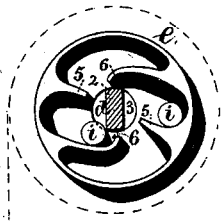

FIG. 4

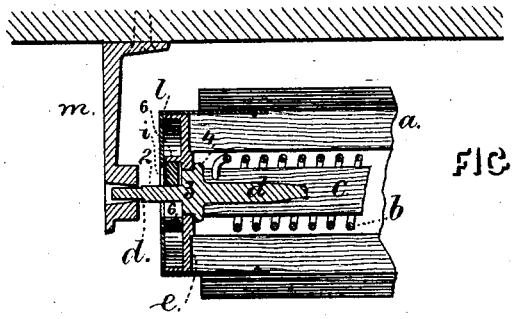

FIG. 1.

WITNESSES.

Chas. H. Smith

Geo. T. Pinckney

INVENTOR.

Edward M. Judd

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

EDWARD M. JUDD, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **162,564**, dated April 27, 1875; application filed November 28, 1874.

To all whom it may concern:

Be it known that I, EDWARD M. JUDD, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Curtain-Fixtures, of which the following is a specification:

Curtain-fixtures have been made with a stationary axis at one end of the roller and a helical spring acting between the axis and the roller to revolve the latter and wind the curtain or window-shade thereon, and in this class of fixtures there have been several devices used between the axis and the roller to prevent the curtain being wound up by the spring, among which devices may be named a pawl on the roller and a notch in the axis, also two stops, one on the roller end, the other upon a disk attached to the axis, as in Patent No. 129,889, and also a ball or balls in the roller end, and notches or cavities in the cam shaped axle, as in Patents Nos. 101,440, 132,376, and 140,997.

My present invention relates to an improvement in the general class of curtain-fixtures before named; and said improvement consists in a flattened axle, having a cylindrical base and collar, against which the roller end revolves, in combination with a roller end having elliptical recesses positioned diagonally to the center of the roller end, and short cylinders within these elliptical recesses, confined by a cap, the parts being constructed so that when the roller is turned by drawing the curtain down, the flattened axis will lift the cylindrical stop and roll it back; when the roller is stopped the cylindrical stop rolls to the inner end of the elliptical recess and stops against the flattened axis, and when the curtain is allowed to run up, the cylindrical stops are thrown away from the axis by centrifugal force.

In the drawing, Figure 1 is a section, longitudinally of the roller at one end thereof. Fig. 2 represents the axle and roller end with the stops in action, holding the roller quiescent. Fig. 3 shows the parts in position as the curtain is being pulled down, and Fig. 4 represents the stops as thrown out by centrifugal force as the curtain is running up.

The roller *a* is bored out at one end to receive the spring *b* and wooden rod *c*, around which the spring is coiled, and one end of such spring is attached to the roller and the other to said rod *c*, as usual, and at the end of the rod *c* is the metal axle *d*, having a flattened portion, 2, outside the cylindrical portion 3 and collar 4, against which collar the roller end *e* revolves. The roller end *e* is made with cavities or recesses of elliptical shape, placed diagonally to the radial lines from the center of the roller end, so that the side 5 of such elliptical recess is nearly in the radial line, and the end 6 of such elliptical recess forms a sudden curve into which the cylindrical stop *i* drops when it comes into contact with the flat side of the axis, and arrests the movement of the curtain-roller, as seen at Fig. 2. When the curtain is being drawn down, the flat side of the axis presses the roller-stop back out of the way, as indicated in Fig. 3, and the side 5 of the elliptical recess, being nearly in a radial line, does not act as a stop, should the cylindrical stop *i* fall between it and the flattened axis, because that flattened axis acts to push the stop *i* away in a radial direction. The sheet-metal cap *l* retains the parts in place, and it and the roller end *e* are secured to the wooden roller by pins or other convenient appliance. The bracket *m* for sustaining this end of the roller is made with the usual notch for the flat portion of the axis that projects beyond the cap *l*.

I claim as my invention—

The roller end *e*, made with elliptical recesses placed diagonally as specified, in combination with the flattened axis, stops *i* and spring curtain-fixture, substantially as set forth.

Signed by me this 24th day of November, A. D. 1874.

E. M. JUDD.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.