O. ELLSWORTH.

Curtain-Fixtures.

No. 161,496. Patented March 30, 1875.

FIG. 1.

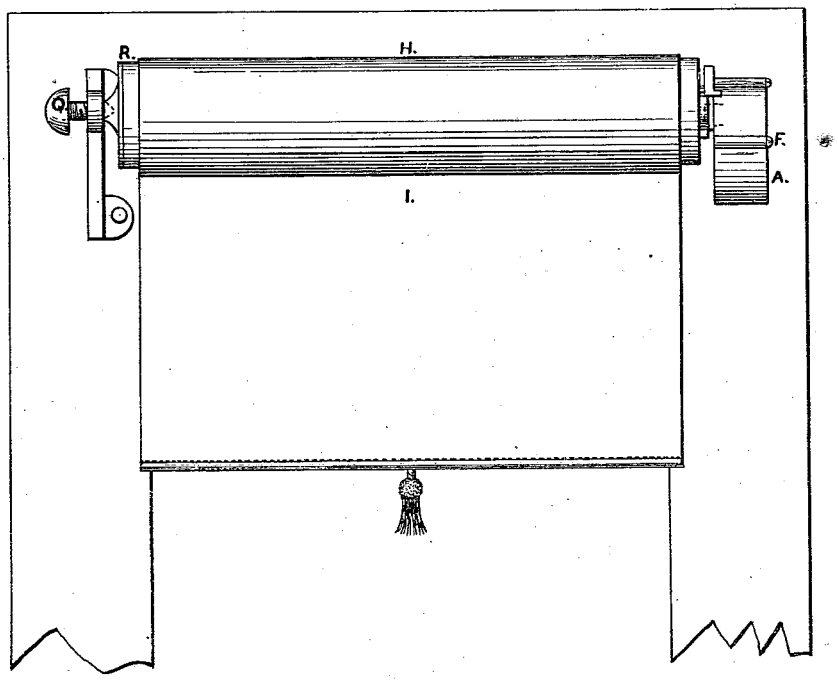


FIG. 2.

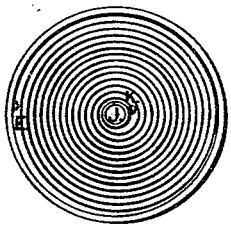


FIG. 3.

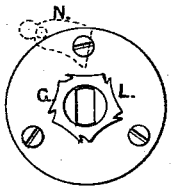
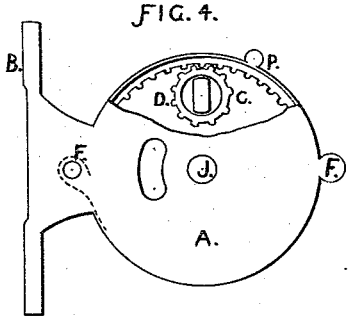


FIG. 4.



WITNESSES:

Jno. D. Patten

Joseph E. Wildman

INVENTOR:

Oliver Ellsworth.

By his Atty. J. Dennis Jr.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

OLIVER ELLSWORTH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **161,496**, dated March 30, 1875; application filed July 29, 1874.

To all whom it may concern:

Be it known that I, OLIVER ELLSWORTH, of Boston, Suffolk county, and State of Massachusetts, have invented an Improvement in Curtain-Fixtures, of which the following is a specification:

The object of my invention is to make a cheap and durable curtain-fixture that can be worked with the greatest facility.

Figure 1 is an elevation of the said curtain-fixture, as applied to a window. Fig. 2 is the spring; Fig. 3, the plate and ratchet fastened to the end of the roller; Fig. 4, a side elevation of the principal bracket.

In the above-mentioned drawings, A is a cast-iron bracket, made in the form shown, or in such other form as will answer the purpose, with a foot, B, by which it is fastened to the window-casing. This bracket A has a flange on one side forming a cavity for the internal gear C, pinion D, and spring E, which work in the bracket, and are covered by a plate fitted to the flange and fastened by screws F, said spring having its inner end fastened to the shaft of the roller upon which the curtain is wound, and its outer end to a stud secured to the bracket in such a manner that as the pawl which holds the curtain in position is raised out of contact with the ratchet-wheel, the spring will act upon the internal gear C and pinion D, giving to both a rotary motion, as well as to the curtain-roller, thus winding up the curtain.

The bracket A has a hub on it, which is perforated for the pivot of the pinion D to turn in, which pivot is flattened on two sides at the end to fit the coupling-plate G, Fig. 3, which is fastened to the roller H of the curtain I. The pinion D is turned by the gear C, which is provided with a pivot, J, which turns in perforations in the plates of the stand A. The pivot J has a lug, K, on it, on which the spring E is hitched. The opposite end of the spring is fastened by the screw F. The coupling-plate G is cast with the ratchet L on it, which is peculiar in its construction, being made with alternate notched teeth and plain spaces, as shown in the drawing, Fig. 3, so that when the curtain is pulled down and suddenly released the plain spaces on the ratchet throw up the pawl N, so that the notches in the ratchet are not caught by the pawl, and the spring winds up the curtain. But when the curtain is pulled down as far as desired, and held or released slowly, the pawl N has time to fall into a notch in the ratchet, and holds the roller H against the action of the spring E, and when it is desirable to wind up the curtain, pull it a little, and release it suddenly, and the spring will wind it up. The pawl N vibrates on a screw in the lug P on the flange of the bracket A, and it may be provided with a lug to attach a cord to trip it, if desired.

The left hand end of the roller H is provided with a cast plate, with a hub on it, which is countersunk for the end of the screw Q, in the bracket R, which is fastened to the window-casing. The plate G and ratchet L are perforated, and fitted to the hub on the bracket A, which hub serves as a pivot for the plate to turn on.

I claim—

1. In a spring curtain-fixture, the arrangement, with reference to the curtain-roller, of the spring E, internal gear C, and pinion D, substantially as described, for the purpose specified.

2. In combination with the roller H, pinion D, and internal gear C, the ratchet L, having inclined notches alternating with concave or plain portions, all constructed to operate substantially as described.

OLIVER ELLSWORTH.

Witnesses:

J. W. PEARSON,

O. C. FISHER.