G. W. BEERS.

Curtain-Rollers and Brackets.

No. 167,056. Patented Aug. 24, 1875.

Fig 1

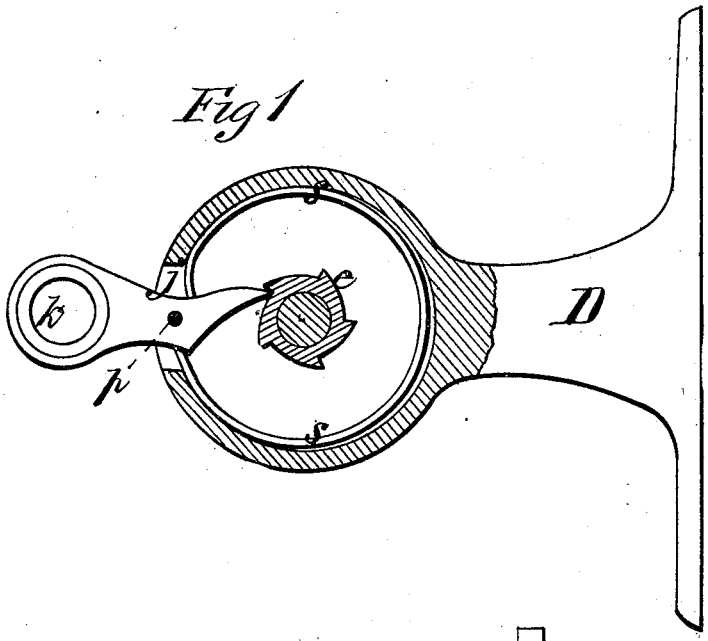


Fig 2

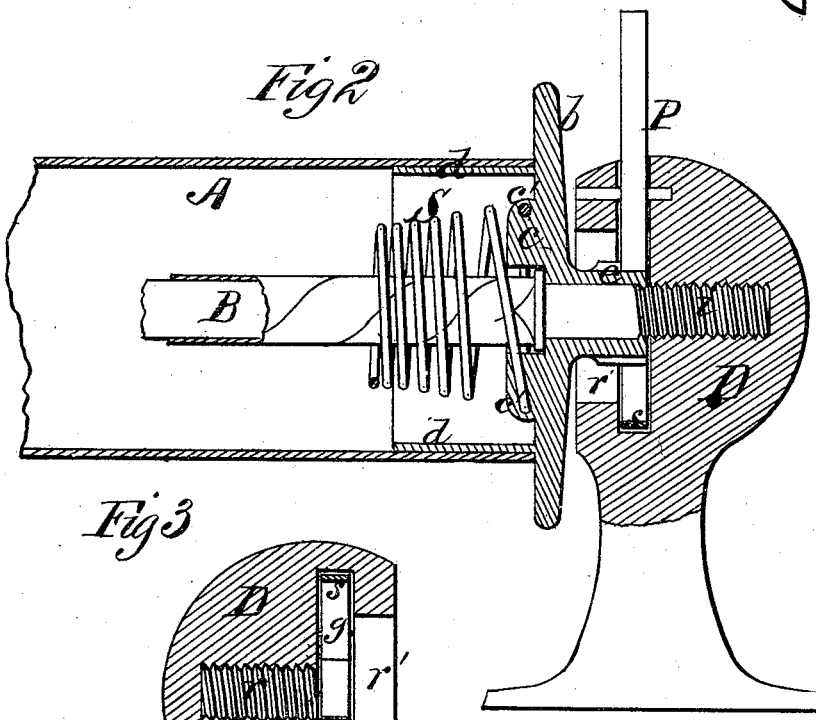
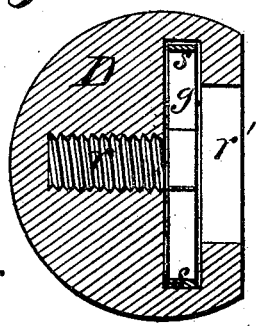


Fig 3



WITNESSES

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GEORGE W. BEERS, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN CURTAIN ROLLERS AND BRACKETS.

Specification forming part of Letters Patent No. **167,056**, dated August 24, 1875; application filed July 3, 1875.

To all whom it may concern:

Be it known that I, GEORGE W. BEERS, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and valuable Improvement in Curtain-Rollers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my curtain-roller, and Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a sectional detail view.

This invention has relation to improvements in that class of curtain-rollers for which Letters Patent of the United States were granted to me, dated June 16, 1874, and numbered 152,065, wherein a curtain-roller acted on by a spring for rolling up the curtain, and a pawl-and-ratchet connection for holding the curtain at any desired point of adjustment.

The object of the invention is mainly to improve the devices therein shown by simplifying their co-operation; also, to provide a means for more securely fastening the main actuating-spring to the axial shaft and to the roller-head, and to do away with the spiral spring shown in the above-mentioned Letters Patent for operating the pawl, and substitute an annular strap-spring in its place. To this end the nature of the invention consists in the novel construction and arrangement of a tubular metallic roller and of its actuating-spring, its pawl-and-ratchet connection, and of its minor details, as will be fully claimed and explained hereinafter.

In the annexed drawings, the letter A represents a curtain-roller, which is preferably of metal and of tubular form, having its ends closed by flanged heads *b*. These heads are centrally perforated for the purpose of affording bearings to a shaft, B, which passes through the said tube, and has coiled around it a suitable helical spring, S, one end of which is rigidly secured to the said shaft, and the other to roller-head *b*. For this purpose the inner face of roller-head *b* is provided with an annular collar, *c*, having two or more lugs, *c'*, diametrically opposite each other, to which the said spring S is rigidly secured by being passed through suitable perforations in the said lugs, and then soldered into place by compressing the metal on the spring, or simply by being soldered without being passed through the above-mentioned perforations. Head *b* is attached to the roller in a very convenient and reliable manner by means of a sleeve, *d*, which is adapted to be received into and fit tightly and snugly in the end of tubular roller A, and the said head is provided on its outer surface with a ratchet-wheel, *e*, for a purpose hereinafter explained. The ends of shaft B project considerably beyond its heads *b*, and find their bearings in two end posts, C D, which are designed to be rigidly but removably secured to the window-frame. That end *i* of this shaft which projects through roller-head *b* is screw-threaded, and it is designed to be inserted into a correspondingly-threaded recess, *r*, in post D, which has also a larger recess, *r'*, adapted to receive the ratchet-wheel *e*. Recess *r'* is of cylindrical form, and a deep annular groove, *g*, is formed at its bottom, into which a strap-spring, *s*, is adapted to be received, for the purpose of holding a pawl to its engagement with ratchet-wheel *e*. This pawl, which I designate by the letter P, passes through a slot, *j*, cut in the wall of post D to an engagement with ratchet-wheel *e* on head *b*, between the ends of spring *s* in groove *g*, and it is pivoted in the said slot by means of a pin, *p*. This pawl is provided on its outer end with an eye, *k*, by means of which a bell-rope is conveniently attached thereto. Pawl P, being, as shown in Fig. 1, between the ends of spring *s*, will, when it is caused to vibrate on its pivot, distend the said spring doubly—that is to say, its ends will be each forced away from the other, and its reaction for the purpose of re-engaging the pawl with the ratchet is thus made instantaneous, so to speak.

The curtain is fastened to the roller in any suitable manner, and being rolled up thereon, the latter is secured into place.

When the curtain is forcibly lowered by drawing upon a tassel secured to the bar on its lower end, spring S will be strongly wound up, as it were, by the revolution of the said roller thus caused, and pawl P, sliding over

ratchet-wheel *e*, will hold the curtain to its desired adjustment.

The curtain may be automatically raised by drawing down upon the bell-cord attached to pawl P, thus disengaging it from ratchet *e*, and allowing spring S to react strongly and expeditiously.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a curtain-roller, the post D, having screw-threaded recess *r*, cylindrical recess *r'*, groove *g*, and pawl P, in combination with spring *s*, arranged in the said groove, and actuating the pawl, ratchet-wheel *e* on roller-head *b*, roller A, shaft B, and spring S, substantially as specified.

2. The combination, with the shaft B and spring S, of the roller-head *b*, having inner annulus *c*, with attaching-lugs *c'*, substantially as specified.

3. The roller-head *b*, having annular flange *d*, inner ring *c*, with lugs *c'*, and edge ratchet-wheel *e*, adapted for use substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE W. BEERS.

Witnesses:

JOHN R. KIMBALL,

ISRAEL W. BULLOCK.