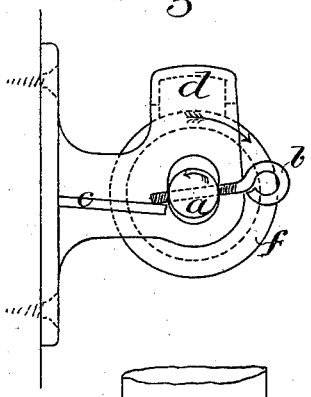
J. M. OSGOOD.

Balance Curtain-Fixture.

No. 216,692. Patented June 17, 1879.

Fig. 1.



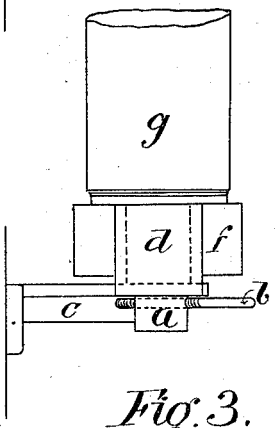
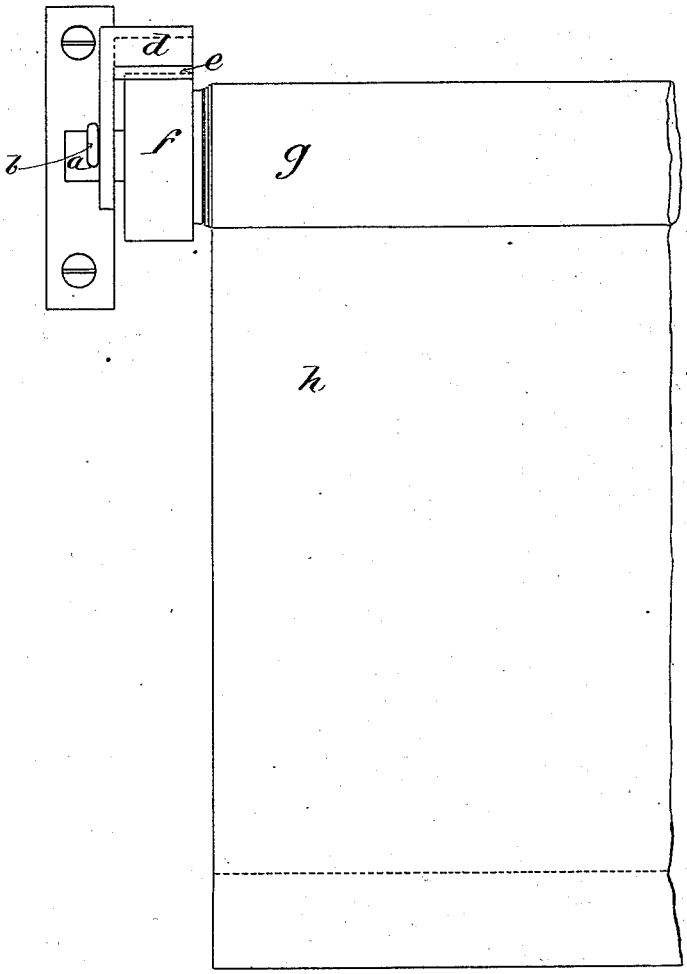


Fig. 3.

Fig. 2.



Witnesses.

Geo. G. Frost

Alfred S. Hall.

Inventor:

James M. Osgood

UNITED STATES PATENT OFFICE.

JAMES M. OSGOOD, OF SOMERVILLE, MASS., ASSIGNOR OF ONE-HALF HIS RIGHT TO HERMON D. OSGOOD, OF SAME PLACE.

IMPROVEMENT IN BALANCE CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **216,692**, dated June 17, 1879; application filed October 25, 1878.

To all whom it may concern:

Be it known that I, JAMES M. OSGOOD, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Balance Curtain-Fixtures, of which the following is a specification.

My invention consists in utilizing the force of the spring that operates the roll for adjusting the balance.

Heretofore such spring balance-rolls have been adjusted by a weight attached to a stick fastened to the lower end of the curtain and other devices.

The difficulty experienced in the use of these methods is found to consist in the want of a proper adjustment of the force of the spring by which the curtain is raised, because the weight required at the bottom of the curtain to hold it in position when unrolled to its full length is so great that when partly raised it overbalances the force of the spring.

The object of my invention is to regulate the tension of the spring by the use of a brake or friction-piece attached to the bracket which holds the end of the roll. This is secured by means of a pin or screw put through the end of the rod, around which the spring is coiled which operates the roll, thus allowing of such a movement of the end of the rod connected with the pin or screw that, in proportion as the tension of the spring is increased or diminished, the roll is forced against the brake or friction-piece on the bracket, the pin or screw operating as a lever against a bar, also attached to the bracket, the leverage of the pin or screw being increased or diminished by pushing it in or out on the bar.

It will readily be seen that by this device the force of the spring used in operating the roll is also applied to the brake or friction-piece, thus equalizing the power of the spring at all points.

The whole pressure of the roll on the brake or friction-piece may be removed, if desired, by the depression of the outer end of the lever, (to this a cord may be attached, if wanted,) thus allowing the full force of the spring to aid in raising the curtain.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a side elevation of the bracket, holding the roll at one end. Fig. 2 is a front elevation of bracket and roll. Fig. 3 is a plan looking down on the top of the bracket and roll.

a is the rod upon which the spring is coiled; *b*, the pin or screw regulating the tension; *c*, the bar on the side of the bracket, forming the stop or fulcrum for the lever *b*. This is placed at an angle, in order that the pin *b* may always bear on the point.

d is the cap holding the friction-piece *e*. *f* is the cap placed on the end of the roll. *g* is the curtain-roller, made in the ordinary manner, with a spring inside, and *h* is the curtain, partially unrolled.

The tendency of the spring is to roll the roller in the direction of the arrow-head, and the central rod in the direction shown by the smaller arrow. The pin *b*, projecting and resting on the bar *c*, prevents the latter motion, and the force of the spring causes the rod to tilt upon the point of the pin *b* as a fulcrum, and forces the piece *f* against the friction-piece *e*, and as the power of the spring at one end is equal to that at the other, the friction, aided by the leverage obtained from the pin *b*, is able perfectly to adjust the tension to the position of the curtain, stopping it in any desired position and balancing it.

Moving the pin *b* in or out on *c* serves to change the leverage, and so vary the friction.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a lever attached to the outer end of the rod, around which the spring is coiled, and a friction-piece upon the bracket, in such manner that the roller end is forced against the friction-piece in proportion to the power of the spring.

2. A pin or screw at the end of the rod, around which the spring is coiled, to act as a lever in applying the friction.

3. A bar or stop attached to the bracket, which holds the end of the roll, arranged as a bearing to change the leverage, as may be desired.

4. A friction-piece, also attached to the bracket which holds the roll in such a manner as to allow the end of the roll to be forced against it by the power of the spring, all arranged substantially as and for the purpose hereinbefore set forth and described.

JAMES M. OSGOOD.

Witnesses:
GEO. G. FROST,
ALFRED S. HILL.