T. CONNELLY & J. F. BICKELL.

CURTAIN-FIXTURES.

No. 194,073. Patented Aug. 14, 1877.

Fig. 1.

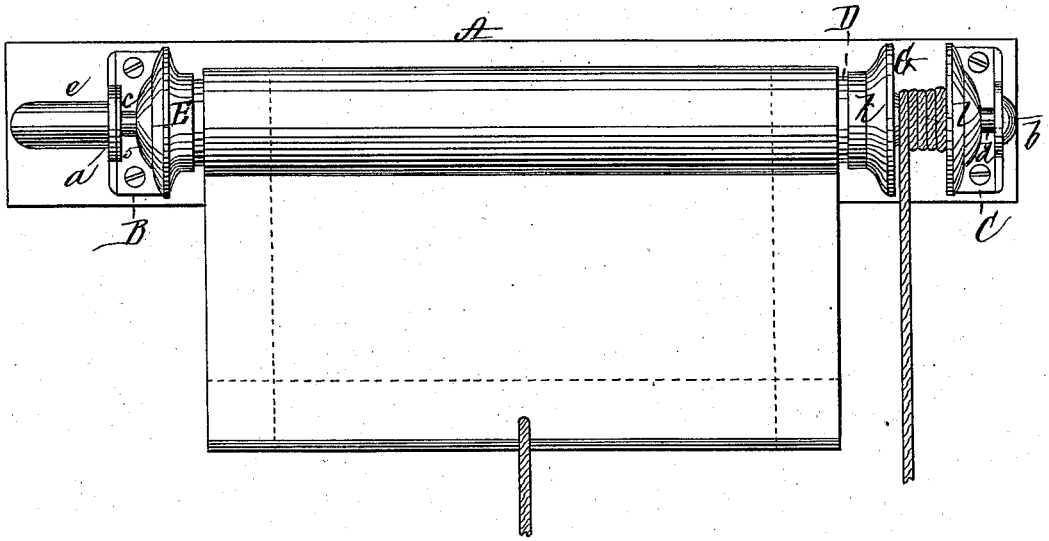
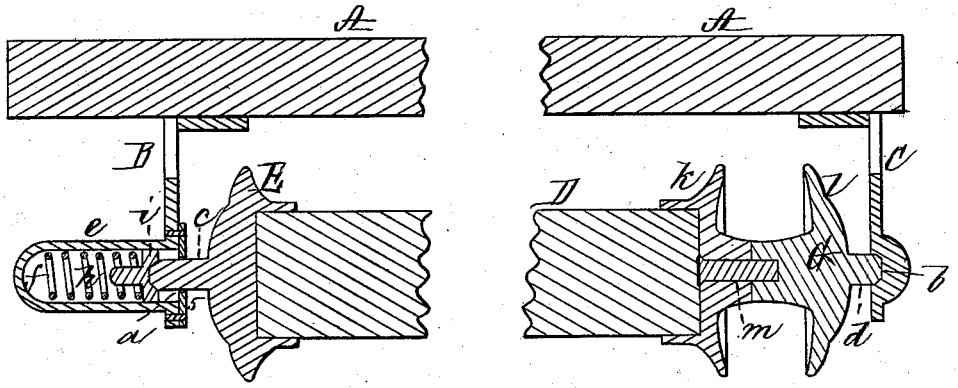


Fig. 2.



Witnessed,
W. J. Cambridge
J. E. Cambridge

Inventors,
Thomas Connelly,
James F. Bickell,
Per Teschemacher & Bloomfield,
Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS CONNELLY AND JAMES F. BICKELL, OF CHELSEA, MASS.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **194,073**, dated August 14, 1877; application filed April 13, 1877.

To all whom it may concern:

Be it known that we, THOMAS CONNELLY and JAMES F. BICKELL, both of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Curtain-Fixtures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front elevation of a curtain-fixture constructed in accordance with our invention. Fig. 2 is a longitudinal section through the center of the same enlarged.

Curtain-fixtures in which one end of the roll is provided with a chamber for the reception of a spiral spring employed for forcing out a pin sliding within an aperture in the spool, and projecting out therefrom into the bearing in the bracket, are objectionable for the reason that they are not reliable in their action, the spring being sometimes cramped against the sides of the chamber, and thus prevented from exerting the required pressure upon the pin to create the necessary friction between its outer end and the bearing to keep the curtain from dropping or unrolling by its own weight, while at other times the lateral play of the pin within the spool is sufficient to cause the former to be thrown out of line with the axis of the roll, producing so much friction that the roll cannot be readily turned when the cord is pulled to raise the curtain.

Our invention has for its object to overcome the above-mentioned difficulties; and consists in the construction and arrangement of the several parts, as will be hereinafter fully described.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents a strip forming the top of a window-frame, to which are screwed the two brackets B C, in the outer ends of which are formed the bearings *a b*, in which the arbors or pins *c d* of the curtain-roll D revolve, one end of the roll being provided with a metallic cap, E, from which the pin *c* projects, and the other end of the roll with a metallic spool, G, provided with a pin, *d*, both pins being fixed, instead of one being made to slide within the spool, as heretofore.

Projecting from the outer end of the bracket B is an extended cylindrical portion, *e*, within which is formed a chamber, *f*, for the reception of a spiral spring, *h*, the chamber being in line with and forming a prolongation of the bearing *a*.

i is a small circular block or disk placed against the spring at the open end of the chamber, and of the same diameter, this disk being held in place therein against the resistance of the spring by a thin plate, 5, attached to the inside of this portion of the bracket, the plate 5 being provided with a circular hole in line with the chamber *f* and of a less diameter.

The size of the hole in the plate 5 is, however, sufficient to admit the pin or arbor *c*, to allow it to receive the pressure of the spring *h*, which thus causes the opposite pin or arbor *d* to press against the inner end of the bearing *b* with sufficient force to create the requisite amount of friction for preventing the roll from turning and the curtain unwinding by its own weight.

The metallic spool G is made in two pieces, *k l*, secured together by a pin, *m*; but instead of being made as shown, the central portion may be provided at each end with a flange, these flanges being of sheet metal, and being turned over the circular rims of the spool; or, if made of wood, the entire spool may be turned in one and the same piece. I prefer, however, to make the cap E and spool G of metal, as, in the event of the falling or careless use of the roll, the parts will not be broken; and as our roll is provided with stationary pins, and does not inclose a spiral spring, the action of these parts is not impaired, as is frequently the case with that class of wooden rolls provided with a sliding pin and inclosing a spiral spring.

By thus placing the spring within the bracket, instead of in the roll, as heretofore, and also dispensing with a pin sliding within the spool, the fixture is rendered more reliable, less liable to get out of order, and, consequently, more durable.

We are aware that a bracket provided with a socket or chamber for the reception of a

spiral spring which exerts a constant and uniform pressure upon the end of the curtain-roll, which construction is intended to insure the curtain being held at any desired height, is old, and such we do not claim, broadly, as our invention; but

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination, with the curtain-roll D, cap E, and metallic spool G, having pins *c* and *d*, and the bracket C, of the bracket B, with its chamber *f* and inclosed spring *h*, block or disk *i*, and plate 5, the several parts constructed and arranged to operate substantially in the manner herein shown and described.

Witness our hands this 11th day of April, 1877.

THOMAS CONNELLY.
JAMES F. BICKELL.

In presence of—
N. W. STEARNS,
P. E. TESCHEMACHER.