W. Campbell,

Curtain Fixture.

No. 113,852. Patented Apr. 18. 1871.

Fig. 1.

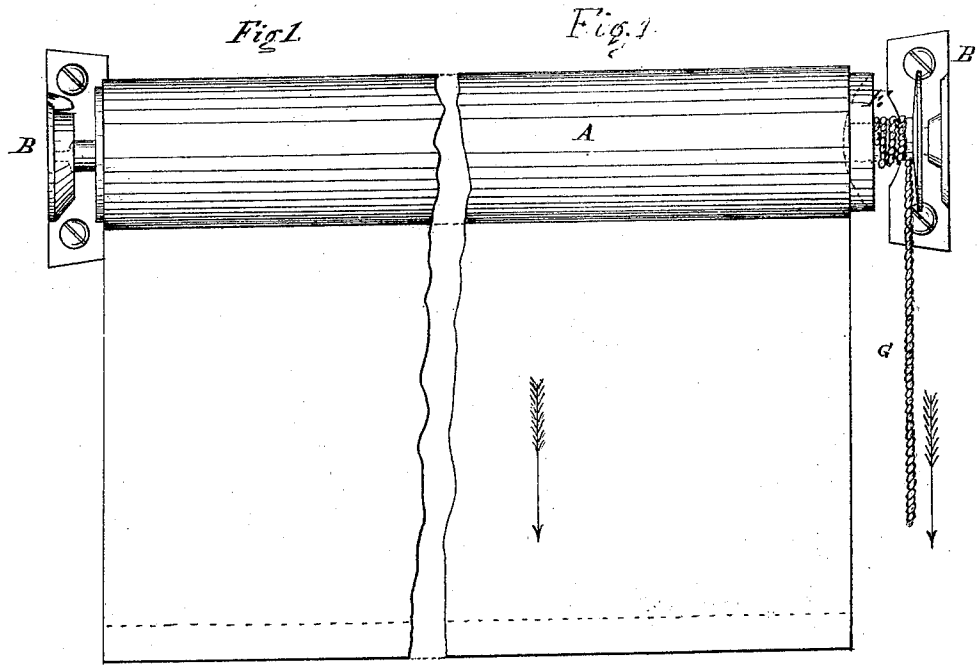
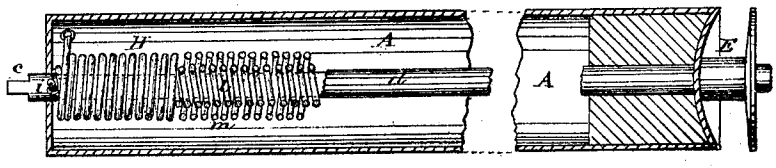


Fig. 2.



Witnesses:

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WILLIAM CAMPBELL, OF NEW YORK, N. Y.

Letters Patent No. 113,852, dated April 18, 1871.

IMPROVEMENT IN CURTAIN-FIXTURES.

The Schedule referred to in these Letters Patent and making part of the same

I, WILLIAM CAMPBELL, of the city, county, and State of New York, have invented certain Improvements in Shade or Curtain-Fixtures, of which the following is a specification.

My improvements relate especially to curtains operated in connection with spring rollers. Such have been made so as to be self-raising, or drawn up by the coiling of a spring within the roller, and drawn down by a cord attached to the bottom slat. This is objectionable on account of the unsightliness of the long cord, made necessary by high windows, and by the considerable force which has to be applied through it to overcome the power of the spring, which is liable to bend the roller in the center when it is long, and to pull off the brackets.

My invention is designed to overcome these objections, and consists of the combination and arrangement of certain parts, as will hereinafter more fully be set forth.

Figure 1 is an elevation of my improved shade-fixture, and

Figure 2 is a sectional view of the ends of the roller, showing the concave spool and the multiple-coiled spring, part of the latter being shown in elevation and part in section.

The roller A may consist of a tin tube, or may be of wood having journals at each end, which have their bearings in the brackets B B in the ordinary manner, that in the spring end *c*, fig. 2, being square to hold the rod *d*, to which the spring is attached, from turning.

At the opposite end the spool E is fixed to the end of the roller.

The spring is adjusted to keep the curtain F rolled up, and the cord G is also wound around the spool in the same direction; consequently, the effect of winding the cord also unwinds (or lowers) the shade, which is held in the desired position by securing the cord in any convenient manner.

When desired to raise the curtain the cord is released, and the force of the spring, by rewinding it on the roller, draws it up.

By this arrangement the necessity of attaching a cord to the slat or bottom of the curtain is obviated, placing the operating-cord next the window-casing, where it is less in the way and not unsightly.

The act of drawing downward on the cord to drop the curtain is the most natural and convenient, and more readily performed at the side than at its lower end.

To prevent the spool occupying too much space between the bracket and roller I recess the side next the roller into the end of same, so as to form an annular chamber of sufficient capacity to contain the cord when rolled up, and yet leave a narrow opening at the periphery.

I form the coiled spring H in a series of coils placed concentrically one within another. Thus the coil *l*, which is connected to the rod at *i*, is spun in one direction a sufficient number of turns when the coils are enlarged, as at *m*, and spun backward over the coil *l* to the place of beginning, when it may be returned in the direction of the first, and the operation repeated as often as the internal diameter of the roller will admit; but two or three series will be found sufficient for the purpose. This forms a spring of very uniform and elastic action. The volutes of each series, reversing the inclination of those adjoining, form an efficient bearing for the support of one another, thereby obviating bending or entangling, and giving more force from the same metal, and the necessary coils for operating a long curtain can be condensed into a short section of the roller.

I claim as my invention—

The spring coil H, connected to the rod *d*, and spun upon the same in opposite directions, as described, in combination with the case A and cord-spool E, arranged and operating together as set forth.

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Witnesses:

KATE N. JONES,

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