(No Model.) 2 Sheets—Sheet 1.

E. T. BURROWES.

HOLDING MECHANISM FOR SPRING ACTUATED SHADES.

No. 510,114. Patented Dec. 5, 1893.

Fig. 1.

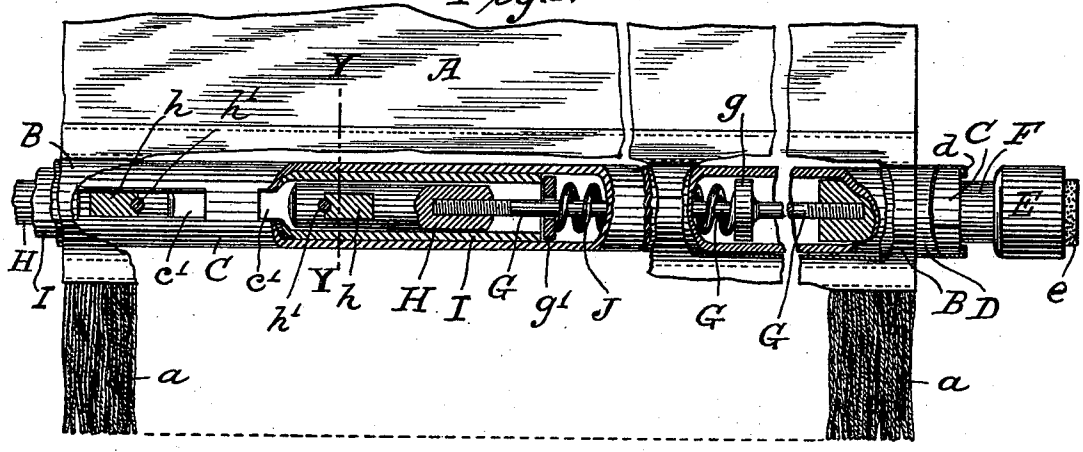


Fig. 2.

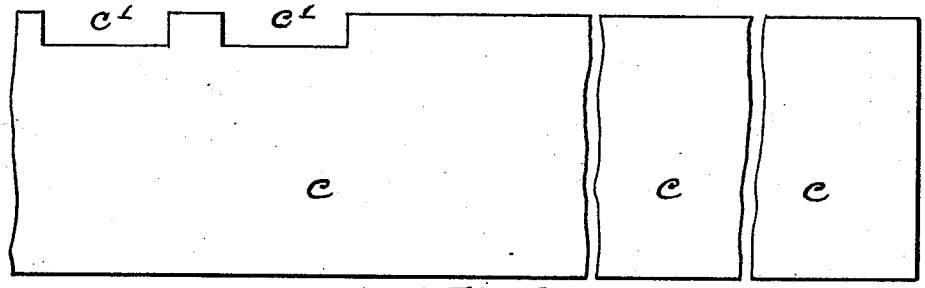


Fig. 3.

Fig. 4.

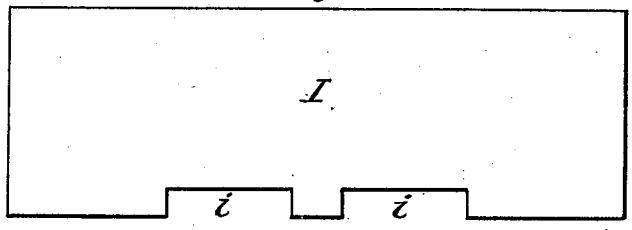


Fig. 5.

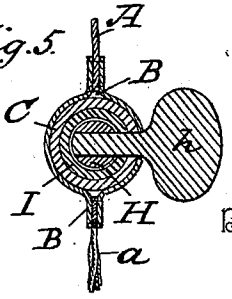
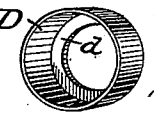


Fig. 6.



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By his Attorney J. B. Thurston

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(No Model.) 2 Sheets—Sheet 2.

E. T. BURROWES.

HOLDING MECHANISM FOR SPRING ACTUATED SHADES.

No. 510,114. Patented Dec. 5, 1893.

Fig. 7.

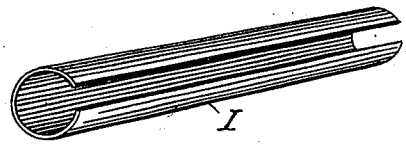


Fig. 8.

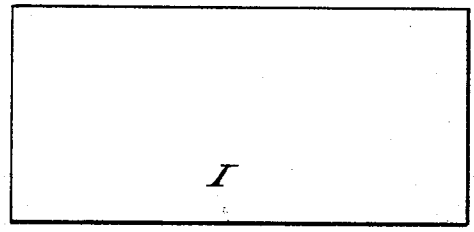
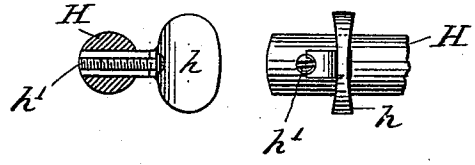


Fig. 9. Fig. 10.



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UNITED STATES PATENT OFFICE.

EDWARD T. BURROWES, OF PORTLAND, MAINE.

HOLDING MECHANISM FOR SPRING-ACTUATED SHADES.

SPECIFICATION forming part of Letters Patent No. 510,114, dated December 5, 1893.

Application filed July 5, 1893. Serial No. 479,569. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. BURROWES, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Holding Mechanism for Spring-Actuated Shades; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to frictional holding mechanism applied to the bottom of a spring actuated shade or curtain, and of the character shown in United States patent to Hall, No. 453,409, dated June 2, 1891, the object of the present invention being to improve upon the construction shown in that patent, and to provide the several useful and novel features in addition, all of which will be fully set forth in the following specification and claims, and clearly illustrated in the accompanying drawings forming a part of same, of which—

Figure 1. is a broken sectional elevation showing parts of the lower portion of a shade supplied with my improved frictional holding mechanism. Fig. 2. is a broken view showing the form for cutting the metal which when rolled makes the tube or shade stick in which my improved holding mechanism is placed. Fig. 3. shows a short tube which fits the interior of the longer tube midway from its ends serving as a stop for the actuating springs, and to add strength to the central portion of said long tube which requires to be slotted. Fig. 4. shows the shape for cutting the sheet metal which when rolled makes the said short tube. Fig. 5. is a cross section taken at Y—Y, Fig. 1. Fig. 6. is a perspective view of a novel attachment which is shown in sectional elevation in Fig. 1. Fig. 7. is a perspective view showing a modification of the short tube illustrated in Fig. 3. by which its construction is cheapened. Fig. 8 shows the shape for cutting the sheet metal which when rolled makes the said short tube as shown in Fig. 7. Fig. 9. is a sectional elevation showing one of the spring actuated stems, its handles or pendants mounted therein and a suitable retaining screw, Fig. 10. being a broken elevation of the same parts.

Similar letters of reference designate like parts throughout the various views.

In the Hall patent above referred to, a piece of gas pipe was used as the hollow shade stick, and this had to be slotted to enter the pendants or handles which seriously weakened its center portion, and in order to attach the pendants rigidly to the spring actuated rods they required to be soldered, thus necessitating the completion of the machine work of the entire frictional holding mechanism within the shade stick before stitching the bottom of the curtain, or forming the pocket for its reception; for should the pocket be formed first, the tube could not enter it on account of the projecting pendants or handles. But with my present improvements these difficulties are readily overcome and advantages added. For instance, the shade stick is made from smooth sheet metal (preferably steel) and reinforced at its weak point by a short tube serving both as a means of strengthening the curtain stick at that point, and to form a stop for the helical springs, as well as a bearing for the adjacent ends of the spring actuated rods or enlarged stems secured thereto, which are provided with a rectangular slot or opening for the entrance of the rectangular tenon of the detachable pendants or handles, which if desired can be inserted horizontally as shown in Figs. 1 and 5, thus permitting the use of fringe as a bottom finish for the shade.

My improved tube or shade stick is provided with end ferrules, preferably made of brass, by use of which the steel tube does not require to be bruised, and the ends which are not fully covered by the leather or bottom of curtain, are nicely finished and the tube is given the appearance of brass. By this construction the shade stick may be easily removed from a curtain when the latter has been soiled, and placed in a new one without trouble, as the curtains may be finished complete with fringe if desired and the frictional holding mechanism attached at any time by removal of the pendants for inserting the shade stick with its pocket.

The curtain material A is provided at its bottom with some suitable pocket B, for the reception of my improved shade stick which contains my improved frictional holding

mechanism consisting of the hollow shade stick C cut from a piece of sheet metal *c*, as seen in Fig. 2, having notches in one edge which when rolled in tubular form make the openings *c'*, as seen in Fig. 1. Instead of brazing the adjacent edges of the metal *c*, they are simply brought closely together and a close fitting ferrule D is mounted at each end, serving both as a retaining collar, and a finish for said shade stick or tube C, by reason of its annular flange *d*, seen in Fig. 6, which projects inward and forms a cap covering the thickness of the metal at the end of tube. Expansion heads E with their frictional tips *e*, made of rubber or other elastic material, are formed upon a stem F which is an easy movable fit for either interior end of said tube or stick C. Spring actuated rods G are attached one end of each to one of said stems F, and the other to a stem H, having their bearing in an interior tube I.

The rods G are provided with a rigid collar *g*, and a movable collar *g'*, upon which and between said collars is mounted a helical spring J.

The stems H will have a rectangular perforation for the reception of the actuating bars or handles *h*, which enter horizontally through the openings *c'* of the shade stick C, and the tube I, may if desired be formed only partially cylindrical, having its adjacent edges far enough apart to admit the said handles *h*, or slots *i* may be formed in the tube for this purpose as seen in Fig. 3, by cutting the metal from which the said tube is formed, as seen in Fig. 4.

The tenons of the pendants *h* may be secured by a screw *h'*, as shown in Fig. 1, which renders them easily detachable from the stems H, which is a feature of considerable advantage, and placing them horizontally in the shade stick avoids any interference (when operating them) with the fringe *a*, which may be stitched to the bottom of the leather or other pocket material B.

What I claim as new is—

1. In spring actuated holding mechanism for shades an exterior tube formed of thin sheet metal slotted as shown, a short reinforcing or strengthening interior tube formed of similar material its ends serving as a stop for the spring actuated holding mechanism, suitable retaining ferrules fitting the ends of said exterior tube, spring actuated rods mounting at their outer ends suitable friction heads and at their inner ends a suitable stem having a rectangular perforation handles, or pendants, having tenons fitting the rectangular perforated stems and secured by screws as shown, each of said rods being provided with a loose and rigid collar, and a helical spring mounted therebetween substantially for the purpose specified.

2. In spring actuated holding mechanism for shades, an exterior tube formed of thin sheet metal slotted as shown, a shorter reinforcing interior tube having slots registering with those of the exterior tube, suitable retaining collars fitting the ends of the latter, spring actuated rods mounting at their outer ends suitable friction heads and at their inner ends a suitable stem to which are attached the operating pendants, and each rod provided with one rigid collar, one loose collar and a helical spring mounted between said collars operating substantially for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD T. BURROWES.

Witnesses:

DAVID W. LUND,

C. H. HUTCHINSON.