

(No Model.)

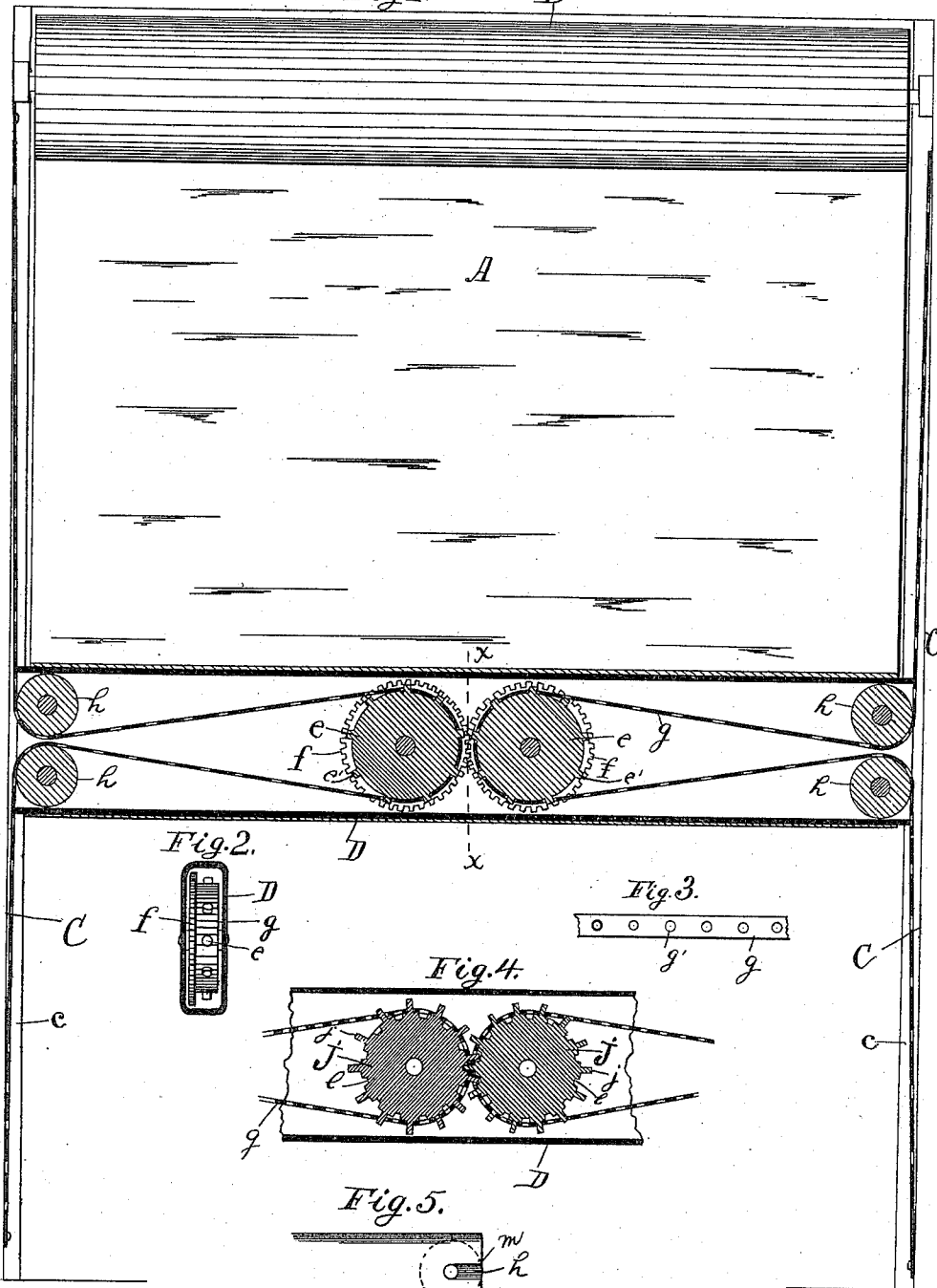
G. H. DAVIS.
CURTAIN HOLDING DEVICE.

No. 577,841.

Patented Mar. 2, 1897.

Fig. 1.

B



Witnesses:
E. Dushy
Wm. J. Lator

Inventor:
George H. Davis
by S. W. Bates
his atty

UNITED STATES PATENT OFFICE.

GEORGE H. DAVIS, OF PORTLAND, MAINE.

CURTAIN-HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 577,841, dated March 2, 1897.

Application filed October 4, 1895. Serial No. 564,697. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. DAVIS, a citizen of the United States, and a resident of Portland, in the county of Cumberland and State of Maine, have invented a certain new and useful Improvement in Curtain-Holding Devices; 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.

My invention relates to a device for holding the lower edge of a flexible shade or curtain in place against the pull exerted by the spring-roller; and the particular object of the invention is to provide the curtain-stick with mechanism by means of which it is retained in place at any point where it stops, it being always retained in a perfectly horizontal position whether it is lifted at the center or at one end.

In carrying out my invention I make use of a hollow curtain-stick applied in the usual manner to the lower end of the curtain. In the curtain-stick are journaled two wheels or pulleys geared or otherwise connected together in such a manner that they will rotate together. The rotation of the wheels is controlled by a chain, cord, or band on each side of the curtain, having its upper end secured to the upper portion of the casing at the side of the opening and having the lower end secured to the lower portion of the casing. The center or body of this band forms a loop which extends into the end of the hollow curtain-stick, the two bands passing around the wheels or pulleys, so that they rotate together as the curtain is raised and lowered, releasing and taking up the same amount of band on each side of the curtain, and so rendering it impossible for one side to move up or down faster or slower than the other.

In the accompanying drawings I have illustrated two different modifications of my invention which I have found to work well in practice, and it is evident that other modifications may be made while keeping within the terms of my claims and within the spirit of my invention.

In the drawings, Figure 1 is a vertical section through the hollow curtain-stick, showing the same attached to the lower end of the

curtain in the usual manner. Fig. 2 is a section on the line *xx* of Fig. 1. Fig. 3 is a face view of the sprocket-band. Fig. 4 is a modification showing the sprocket-wheels geared directly together, and Fig. 5 shows the manner of mounting the antifriction-rolls at the end of the curtain-stick.

A represents the curtain; B, the spring-roll, which may be of any ordinary construction; C, the casing, with the groove *c* therein, and D the hollow curtain-stick, which is secured to the lower end of the curtain in the usual manner. At some point in the hollow curtain-stick D, preferably at or near the center, I journal two wheels or pulleys *ee*, which are preferably sprocket-wheels, with lugs *e' e'*, although they may be plain wheels or pulleys if a plain band or cord is to be used. These wheels are so connected together that they rotate simultaneously, the rotation of one causing the other to rotate at the same rate of speed. This I accomplish, as shown in Fig. 1, by forming or securing on one side of the wheels *e* gears *f*, which engage each other and cause the wheels to rotate together. The rotation of the wheels *e e* is controlled by means of a chain, cord, or band running over them. I prefer to use for this purpose a sprocket-band *g*, having holes *g'*, which fit the sprocket-teeth of the wheels *e*. Two of these bands are used, one on each side of the curtain, and they are secured at their upper ends in the grooves *c* at the upper portion of the casing, the lower ends being in like manner secured to the lower portion of the casing. The central or body portion of the band forms a loop which extends into the end of the hollow curtain-stick, the bands passing around the wheels, so as to cause them to rotate together.

As herein shown in Fig. 1, each band passes around one of the sprocket-wheels *e*, and, being connected together by the gears *f*, the rotation of one causes the rotation of the other. Antifriction-rolls *h* are provided at the ends of the tube where the bands pass in, and these are mounted in the end by means of slots *m*, cut in from the end of the tube. To mount these rolls, it is only necessary to slip them into the slots *m*.

In Fig. 4 I show the wheels *J* geared directly together without the use of any sepa-

rate gears, the wheels engaging each other in such a manner that they act both as sprocket-wheels and as gears. The sprocket-teeth of one wheel fit into the recess *l* in the other, the perforations in the band being numerous enough to let both sets of teeth pass through.

From what has been said of the construction the operation of my curtain-holding device will be readily seen. As the curtain is moved up or down each of the wheels lets off and takes up the same amount of the band on each side, so that the two sides must rise and fall together, and as a result the curtain-stick remains perfectly horizontal. The friction of the parts will in most cases be sufficient to resist the action of the spring-roller; but if additional friction is desired it can be applied to the journals of the wheels or to the band.

While I prefer to use a sprocket chain or band on account of its more positive action, my device can be constructed to use a plain band or a cord, although this form is more liable to slip than the other.

I claim—

1. The herein-described curtain-holding device consisting of a hollow curtain-stick having journaled therein two wheels or pulleys geared or otherwise connected together so that they rotate simultaneously, a band or chain at each side of the curtain having one end secured at the top of the casing and the other end secured at the bottom, said bands or chains forming loops which extend into the ends of the hollow curtain-stick and around said wheels or pulleys.

2. The herein-described curtain-holding device consisting of a hollow curtain-stick having journaled therein a pair of gears in engagement, a pair of wheels or pulleys attached to said gears, a chain or band on each side of the

curtain, the upper end of said chain or band being secured to the upper portion of the casing, thence passing into the end of the hollow curtain-stick and around one of said wheels or pulleys and out at the same end of the curtain-stick, the lower end of said chain or band being secured to the lower portion of the casing.

3. The herein-described curtain-holding device consisting of a hollow curtain-stick having journaled therein a pair of gears in engagement, a pair of wheels or pulleys attached to said gears, a chain or band on each side of the curtain, the upper end of said chain or band being secured to the upper portion of the casing, thence passing into the end of the hollow curtain-stick and around one of said wheels or pulleys and out at the same end of the curtain-stick, the lower end of said chain or band being secured to the lower portion of the casing and the said hollow curtain-stick being provided with rolls journaled at its ends over which the said chain or band passes.

4. The herein-described shade-curtain-holding device consisting of a curtain-stick attached to the lower edge of the curtain, a tape, cord, chain or other equivalent device on each side of the curtain secured by one end at or near the top and by the other end at or near the bottom of the casing, each of said tapes forming a loop which extends in at the end of said curtain-stick and passes over a wheel or pulley pivoted therein, the said wheel or wheels being so arranged that they let off or take up said tapes at the same rate of speed.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

GEORGE H. DAVIS.

Witnesses:

S. W. BATES,

JOHN A. LIDBACK.