(No Model.)

E. E. CLARK.

CURTAIN FIXTURE.

No. 422,379. Patented Mar. 4, 1890.

Fig. 1.

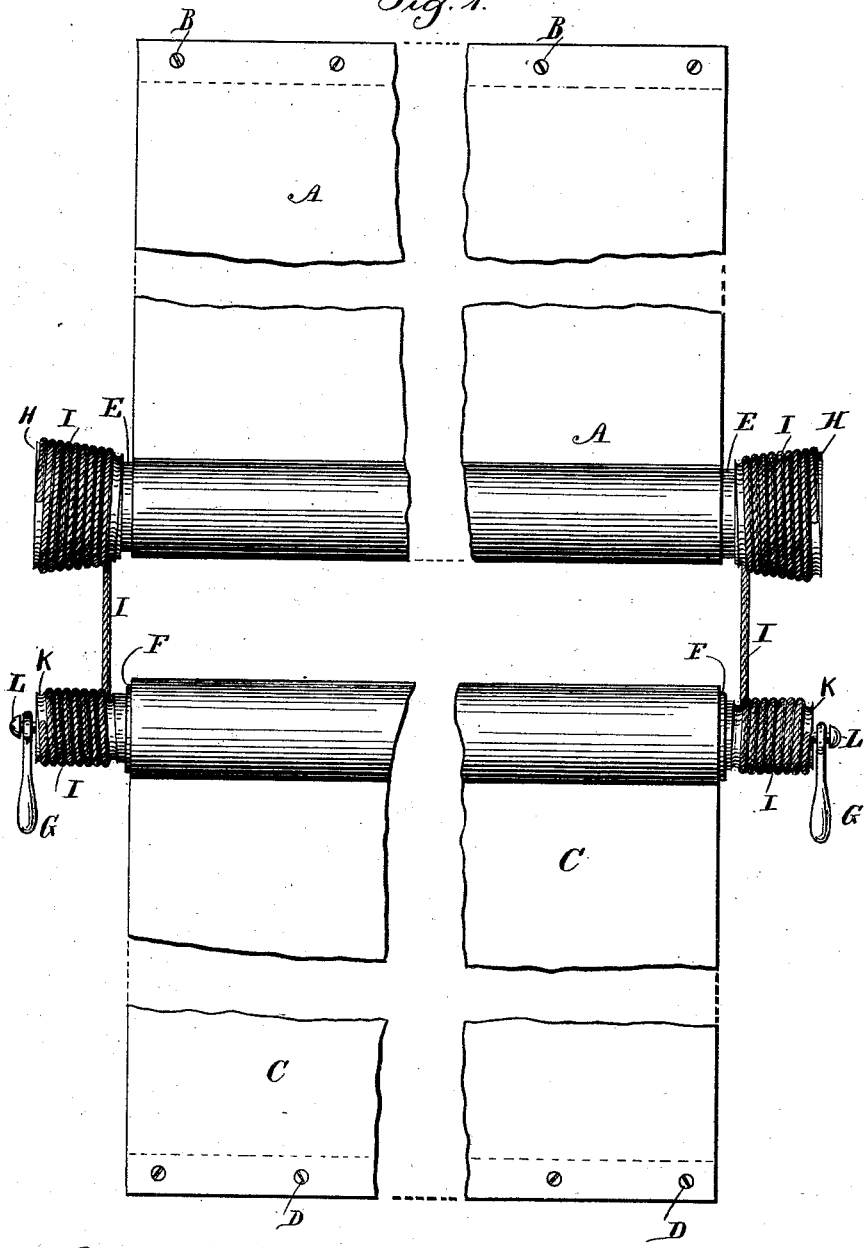
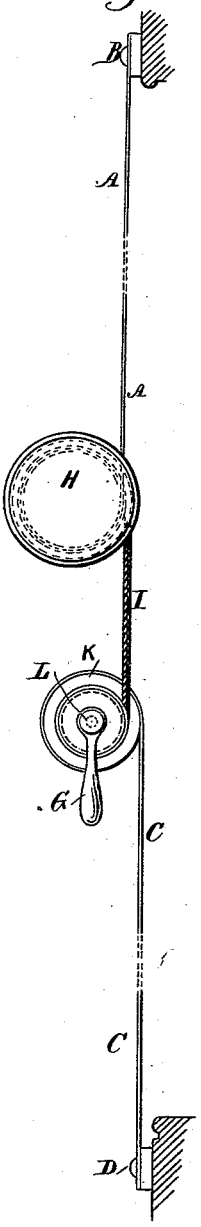


Fig. 2.



Witnesses.

Chas. H. Smith

J. Stair

Inventor

Ezra E. Clark.

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

EZRA E. CLARK, OF NORTHAMPTON, MASSACHUSETTS.

CURTAIN-FIXTURE.

SPECIFICATION forming part of Letters Patent No. 422,379, dated March 4, 1890.

Application filed June 6, 1889. Serial No. 313,322. (No model.)

To all whom it may concern:

Be it known that I, EZRA E. CLARK, of Northampton, in the county of Hampshire and State of Massachusetts, have invented an Improvement in Curtain-Fixtures, of which the following is a specification.

In my present invention two curtains are made use of, one attached at its upper end to the top part of the window frame or casing and the other one attached at its lower end near the window-sill, and the moving ends of the curtains are connected with rollers, and the parts are constructed in such a manner that when the roller of the lower curtain is moved upwardly and the curtain unrolled from the same the upper roller is moved downwardly, so that the two rollers can be brought together to close the window curtains or shades; but when the lower roller is moved downwardly and the curtain rolled upon the same the upper roller is moved upwardly and rotated automatically to roll the upper curtain upon the same, thereby opening the window shades or curtains from the middle both upwardly and downwardly.

In the drawings, Figure 1 is an elevation representing the curtains and rollers as broken apart for contracting the space occupied by the figure, and Fig. 2 is an elevation endwise of the rollers.

The bottom curtain C is connected in any suitable manner—such as by screws D—to the sill or bottom part of the window-frame, and the curtain A is connected at B to the upper part of the window-frame and hangs downwardly. The curtain A is rolled around the roller E, and its ends secured thereto by tacks or otherwise in any suitable manner, and the curtain C is attached at its end to the roller F and rolls around such roller, and at the respective ends of the rollers E and F are cord-pulleys H and K, the cord-pulley H being slightly larger in diameter than the roller E and the pulleys K smaller in diameter than the roller F; and it is preferable to groove these cord-pulleys spirally for the reception of the cords I I, which are wound upon the respective pulleys and their ends fastened to the same, and at the ends of the roller F there are tassels or handles G, with eyes through which pass the central pins L, so that the roller F can be raised or lowered by these handles G, such roller F and its pins L rotating in the eyes upon the handles G. As the roller F is drawn down, the cords I will be given off the pulleys K; but in consequence of the cord-pulleys K being smaller in diameter than the roller F, the cord will not be given off of such pulley as rapidly as the roller F is drawn down; hence such cords I will also be drawn downwardly at the same time, and as they are drawn downwardly the cords will be pulled off the cord-pulley H of the roller E, revolving such cord-pulley and roller E and rolling the roller E upwardly and winding the curtain A thereupon; hence it will be apparent that as the roller F is pulled down by the handles G it is rotated and the curtain C wound upon such roller F, and the roller E is simultaneously and automatically rotated, and it rises as the curtain A is wound thereon. The proportion between the diameters of the cord-pulleys H and K may be such that when the roller F is drawn down to the bottom of the window the roller E will have been drawn up to the top of the window, thus rolling up both curtains A and C, the opening between them commencing in the middle and extending both ways; or, if desired, the proportion between the diameters of cord-pulleys H and K may be such that either curtain may be rolled up only a portion of its length, while the other is entirely rolled up.

In consequence of the diameter of the curtain-roller E or F increasing as its curtain is rolled thereon, it becomes necessary, in order to balance the two curtains, to proportionally increase the diameters of the driving-pulley H as the cords are unwound by making them conical in such ratio that the tension of cords I induced by the weight of the lower curtain-roller F shall equal the tension of cords I necessary to balance the weight of curtain-roller E. In other words the cord-pulleys H are made like a fusee, so that the lower curtain-roller F shall in any position balance the upper curtain-roller E.

I claim as my invention—

The combination, with the curtains A and

C, attached, respectively, at their upper and lower ends, of the rollers E and F for such curtains, the cord-pulleys H and K at the ends of the respective rollers, the pulley K being of smaller diameter than the roller F, and the cords I, connected with such cord-pulleys and rolling upon the same as the rollers are brought toward each other, and being drawn off the cord-pulleys as the rollers are separated, substantially as set forth.

Signed by me this 4th day of June, 1889.

EZRA E. CLARK.

Witnesses:
CHARLES N. CLARK,
CHARLOTTE M. TAYLOR.