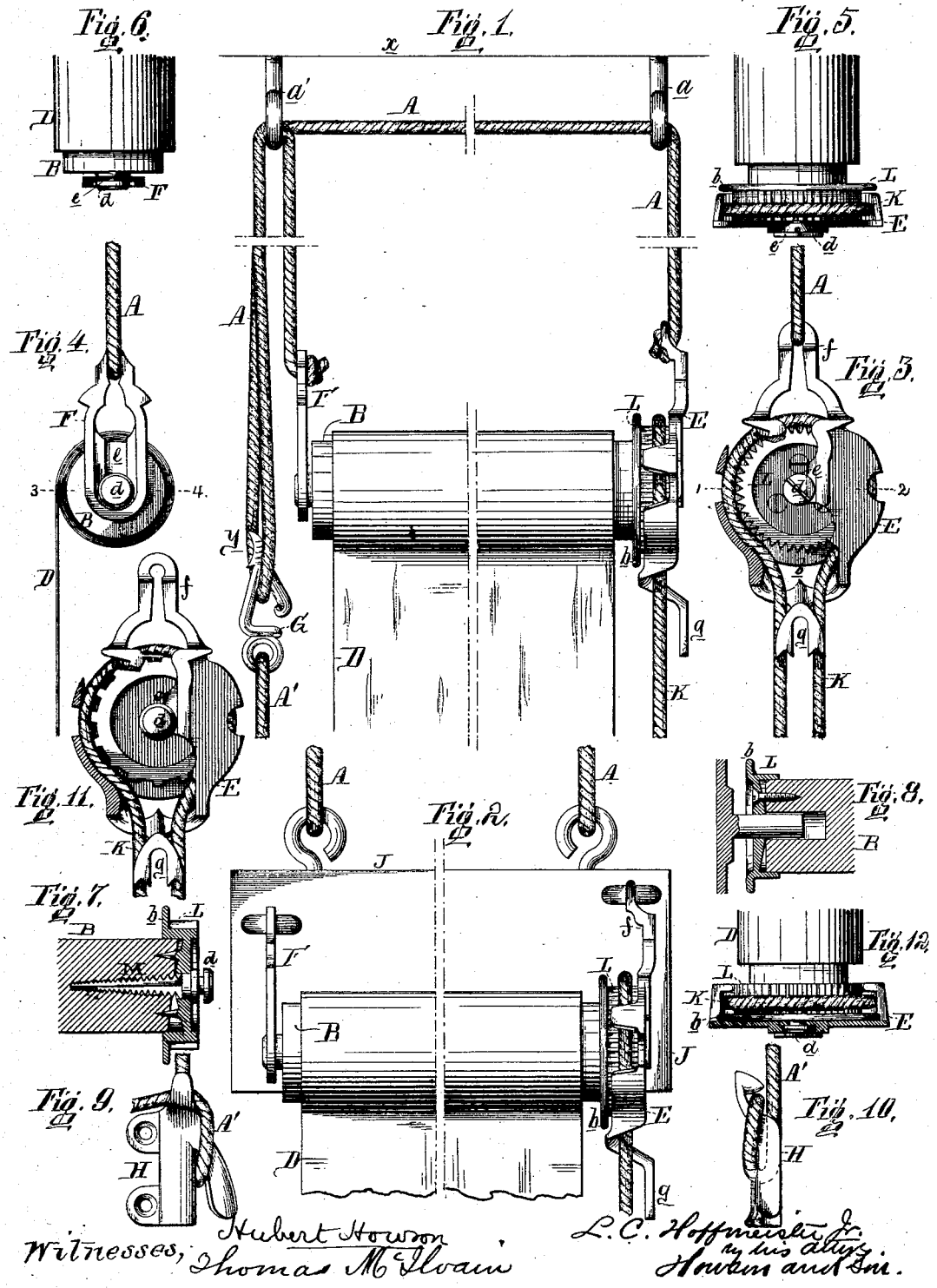
L. C. HOFFMEISTER, Jr.

Window-Shade Fixture.

No. 162,653. Patented April 27, 1875.



Witnesses, Hubert Howson, Thomas McSloan

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UNITED STATES PATENT OFFICE.

LOUIS C. HOFFMEISTER, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WINDOW-SHADE FIXTURES.

Specification forming part of Letters Patent No. **162,653**, dated April 27, 1875; application filed March 31, 1874.

To all whom it may concern:

Be it known that I, LOUIS C. HOFFMEISTER, Jr., of Philadelphia, Pennsylvania, have invented certain Improvements in Window-Shade Fixtures, of which the following is a specification:

The main objects of my invention are to facilitate the lowering of window-shades from the tops of windows, to dispense with the usual side racks, pulleys, and cords, and to facilitate the hanging of shades; and I attain these objects by the use of the suspension-cords, attachments, and fixtures which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figures 1 and 2 are front views of part of a shade-roller and shade suspended from the top of a window in accordance with my invention; Fig. 3, a view of one end of the shade-roller with its appliances; Fig. 4, a view of the opposite end of the said roller; Fig. 5, a sectional plan on the line 1 2, Fig. 3; Fig. 6, a sectional plan on the line 3 4, Fig. 5; Figs. 7 and 8, sectional views of the shade pulley and roller; Figs. 9 and 10, views of a cleat used in carrying out my invention; and Figs. 11 and 12, views of modifications.

The line *x* in Fig. 1 represents a portion of the top of a window-frame, from which, by means of eyes *a* and *a'*, and a cord, A, passing through the same, are suspended a shade-roller, B, and shade D. One end of the suspension-cord A is secured to the roller attachment E, and, after having been passed through both eyes *a* and *a'*, and looped at *y*, is returned through the eye *a'*, and secured at its opposite end to the roller attachment F.

The shade and its roller are thus sustained by a single cord, by which they can be raised to the top of the window, or lowered to any point desired.

The roller can be adjusted to an exact horizontal position by manipulating the looped portion *y* of the cord in a manner which will be readily understood without explanation, and when thus adjusted is retained by wedging the loop *y* into the angle of a V-shaped eye or hook, G, to which the operating-cord A′ is attached.

By raising and lowering the cord A′, the shade may be correspondingly raised and lowered at the top, and when the required adjustment has been effected the said cord is made fast to a cleat, H, secured to the side of the window-frame. (See Figs. 9 and 10.)

If desired, pulleys may be substituted for the eyes *a* and *a'*; but I prefer the latter.

In order to facilitate the adjustment of the suspended shade, I propose, in some instances, to increase its weight by the addition of a cross-piece, J, (shown in Fig. 2,) the attachments E and F being, in this case, secured to the said cross-piece, which is, in turn, suspended from the cord A. This cross-piece is absolutely essential in suspending a spring-roller, for it prevents the unwinding of the spring.

In winding and unwinding the shade, I turn the roller by means of a loose endless cord, K, and dispense entirely with the usual side racks. This cord is adapted to the toothed or serrated roller-pulley L, and to the interior of the recessed attachment or bracket E, between which and the said pulley it is pressed, owing to the weight of the roller and shade, as shown in Figs. 3, 5, and 11, sufficient friction being thus created to permit the pulley to be turned by means of the cord, and to prevent the accidental unwinding of the shade.

The serrations of the pulley L may be of any suitable character. In Fig. 3 sharp serrations are shown, while in Fig. 11 they are blunt. The said pulley has a single flange, *b*, which I prefer to make at its inner edge as shown in Figs. 1, 5, and 7, as it then aids in retaining the cord K within the attachment E; but it may be made at the outer edge of the pulley as shown in Fig. 8, and be adapted to an internal groove in the attachment, as seen in Fig. 12. In either case the pulley is quite as effective, and much cheaper to mold and cast than the ordinary double-flanged or grooved pulley. The pulley is retained within the attachment E by adapting its flanged journal *d* to the lower contracted portion of a slot, *e*, at the back of the said attachment, as shown in Figs. 3 and 5, the upper portion of the said slot being sufficiently enlarged to permit the introduction of the journal. The same feature and method of attachment are shown in Figs. 4 and 6, in connection with the fixture F at the opposite end of the roller.

The attachment E has a slotted projection,

f, at the top, by means of which it may be secured to the suspension-cord A or weighted cross-piece J, or to a window-frame, a screw or nail being also passed through a slotted projection, *g*, at the bottom of the said attachment, when the latter has to be fastened to a window-frame. The projection *g* serves the further purpose of separating and preventing the twisting of the operating-cord K at a point adjacent to the attachment. (See Figs. 1 and 3.)

In sawing off the ends of shade-rollers, they are frequently, through carelessness, cut at an angle, as shown in Fig. 7, in which case it is difficult to properly secure the pulleys; but by recessing the said pulleys, so that they will fit snugly over the rollers, and by forming them with an internal central projection adapted to the end of the roller, as shown in Figs. 7 and 8, they can be fitted to the latter with perfect truth.

The pulley is secured to the roller end by a tapering pin, M, having longitudinal serrated ribs, and the head of which is recessed, so as to form a flanged journal, *d*, adapted to either of the attachments E or F. (See Fig. 7.)

This pin cannot be readily withdrawn from the roller, and may be used for attaching a disk to the latter as well as a pulley; or it may be driven directly into the end of the roller without a disk, in order to form a journal for the said roller, as shown in Figs. 4 and 6, and at the left-hand side of Figs. 1 and 2.

In the modification, Fig. 8, a journal on the attachment or fixture is adapted to a central opening in the pulley and roller end.

I claim as my invention—

1. The combination of the shade-roller B, the continuous looped suspension-cord A, attached to the opposite ends of the said roller, and adapted to eyes or pulleys *a* and *a'* at the top of the window-frame, and the V-shaped hook or eye G, into which the looped portion of the cord can be wedged, for the purpose of maintaining the roller in a horizontal position, all substantially as specified.

2. The combination of the roller-pulley L and bracket E, having a lip over which the cord passes, and between which and the pulley the cord is compressed by the weight of the roller and its attachments, substantially as described.

3. The within-described shade-pulley, having a flange, *b*, at one edge only, and a toothed or serrated periphery, in combination with the fixture or attachment E, which, in conjunction with the said single flange *b*, will retain the curtain-cord on the periphery of the roller.

4. The recessed shade-pulley L, having an internal conical projection, adapted to the center of the end of the shade-roller, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

L. C. HOFFMEISTER, JR.

Witnesses:
WM. A. STEEL,
HUBERT HOWSON.