

C. BUCKLEY & L. L. SAWYER.
Curtain-Fixtures.

No. 147,099.

Patented Feb. 3, 1874.

Fig. 1

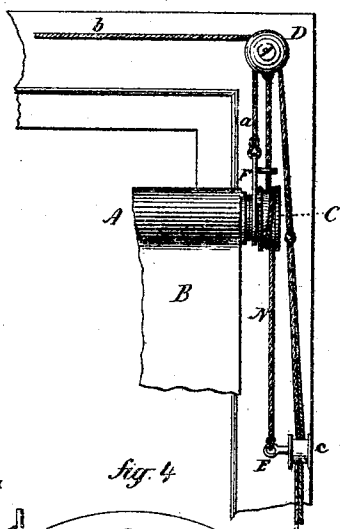


Fig. 2

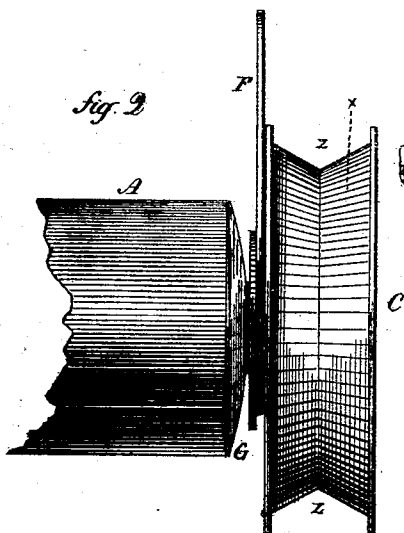


Fig. 4



Fig. 3

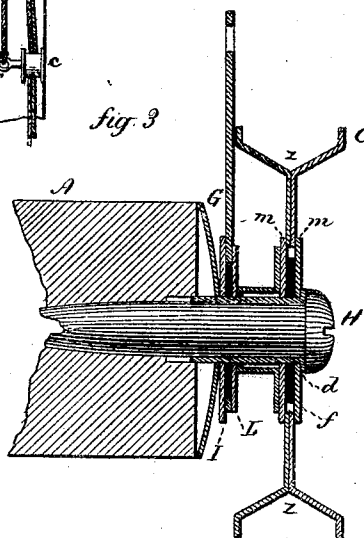


Fig. 5

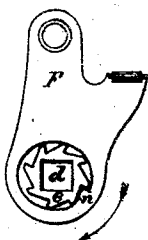


Fig. 6

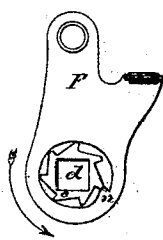
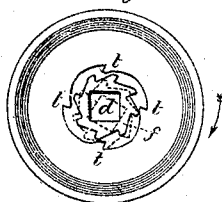


Fig. 7



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CHAUNCEY BUCKLEY AND LODOWICK L. SAWYER, OF MERIDEN, CONN.

IMPROVEMENT IN CURTAIN-FIXTURES.

Specification forming part of Letters Patent No. **147,099**, dated February 3, 1874; application filed October 1, 1873.

To all whom it may concern:

Be it known that we, CHAUNCEY BUCKLEY and LODOWICK L. SAWYER, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Curtain-Fixtures; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view of a portion of a window-frame, showing the application of the shade thereto; Fig. 2, a side view of one end of the roll with the mechanism attached; Fig. 3, a longitudinal central section of the same; Fig. 4, a section, on line *x x* of Fig. 2, showing the construction of the pulley; Figs. 5, 6, 7, detached views, to illustrate the construction and operation.

This invention relates to an improvement in fixtures for window-shades, designed for rolling the curtain from the top down or from the bottom up, as occasion may require; and the invention consists, first, in constructing the halyard-plate so as to surround and work upon a ratchet as a bearing, the roll turning freely in one direction, but engaging a tooth upon the halyard-plate in the opposite direction, so as to prevent the ratchet from turning; second, in constructing the pulley so as to surround and work upon a ratchet as a bearing, so that the pulley turns freely in one direction without effect upon the roll, but turning in the opposite direction engages the ratchet, so that the turning of the pulley will cause a corresponding revolution of the roll.

The roll *A*, to which the window-shade is attached, may be of wood or other suitable material, the shade *B* attached thereto in any known manner. Upon each end of the roll a pulley, *C*, is attached, and around this pulley a cord, *N*, is wound, one end of the cord rigidly secured at the top of the window, as at *D*, and the other below, as at *E*, so that as the roll moves up and down this stationary cord will cause the pulley to revolve. To raise or lower the roll a cord, *a*, is attached to a halyard-plate, *F*, and a corresponding cord, *b*, to a corresponding halyard-plate upon the other

end, the two cords brought together over a pulley at *D*, and to any suitable securing device, *c*, on the window-frame; hence taking hold of the two cords and drawing down will raise the roll and pulley, and loosing the two cords will allow the pulley and cord to drop. To this extent this fixture is not new.

In operating, it is desirable to raise the shade without rolling, and also that the curtain may be drawn down without lowering the roll. To do this it is necessary that the pulley should revolve independent of the roll, but should engage the roll when running down, and that, in rising, the halyard-plate should engage the roll, so that it will not revolve with the pulley. To do this a friction upon the roll is necessary, sufficient to counterbalance the weight of the shade. We place a disk, *G*, formed from sheet metal, of a concavo-convex form, against the end of the roll, which is prevented from revolving with the roll by a square sleeve, *d*, and through this sleeve the adjusting-screw is set, bearing the pulley against the disk, so that, if the pulley is held to prevent its rolling, the disk is held accordingly, and the friction upon the end of the roll is sufficient to prevent the weight of the shade from turning the roll. Onto this sleeve and next the disk *G* a flat collar, *I*, is placed, and next to this a ratchet, *e*. Over this ratchet the halyard-plate *F* is placed, the halyard-plate *F* being of the same thickness as, or a little less than, the ratchet. The opening through the halyard-plate that allows it to set over the ratchet is of such size that the ratchet will turn freely therein, as denoted by the arrow in Fig. 6; but when turning in the opposite direction, as in Fig. 5, will engage a tooth or notch, *n*, formed in the opening. Outside this halyard-plate another collar, *L*, is placed, the diameter of the two collars being larger than the opening in the halyard-plate, so that the two collars serve to retain the halyard-plate in place, and yet allow its free working. Outside this collar, in a convenient position, a second ratchet, *f*, is placed upon the sleeve, as seen in Figs. 3 and 7, and over this ratchet, between the collars *m m*, the pulley is set, the opening through the pulley being similar to that described in the halyard-plate, so that the pulley will revolve in the direction of the arrow, free and without effect upon the ratchet,

but, turning in the opposite direction, notches *t*, more or less in number, will engage one or more of the teeth in the ratchet, as denoted in broken lines, Fig. 7, and when thus engaged the friction-plate *G* will be turned with the pulley, and the roll also turned; hence, when drawing up on the cords *a b* to raise the roll, the pulley will revolve in the direction of the arrow and free from the roll, and the shade will be raised bodily without rolling, and will be held in any convenient position by the device *c* or otherwise, and when thus held, if the shade *B* be drawn down, by taking hold of the shade the roll must revolve. In order to prevent the pulley from running down by such pulling, the ratchet *e* engages in the halyard-plate, as seen in Fig. 5. This brings the strain of the pulling entirely upon the halyard-plate and the cords attached. Then, if desired to wind the shade upon the roll, loose the cords *a b* and allow the roll to fall, in doing which the pulley revolves in the opposite direction to that denoted by the arrow in Fig. 7, and engages the ratchet *f* and causes the roll to revolve and wind the shade thereon as it descends. The other ratchet *e* at the same time revolves, as denoted in Fig. 6, freely within the halyard-plate. Drawing upon the cords *a b* the pulley revolves, as denoted by the arrow in Fig. 7, and its revolving has no effect upon the roll. The screw *H* forms the bearing within the sleeve, upon which the roll turns. The friction-plate *G* may, by means of the screw, be pressed with greater or less force against the roll to increase or diminish the friction.

The pulley *C* is formed from two disks of sheet metal struck into form, as seen in Fig. 3, joined at their center in the line *z z*, so as to make a groove upon their periphery. The periphery or groove is corrugated, as seen in section in Fig. 4, the corrugation being formed in each part by the dies, which strike up and shape the two parts. This corrugation is designed to prevent the slipping of the pulley on its cord.

We claim as our invention—

1. The combination of the friction-plate *G*, the pulley and its ratchet, with the square or angular shaped sleeve *d*, substantially as set forth.

2. The combination of the ratchet *f* and the pulley *C*, the pulley constructed with teeth or notches *t*, corresponding to the teeth of the ratchet, as specified, so as to form the bearing upon which the said pulley revolves freely in one direction and engages in the reverse direction, substantially as described.

3. In combination with the pulley and roll of a curtain-fixture, the halyard-plate *F*, with the ratchet *e* within the said halyard-plate, the said plate *F* constructed with teeth or notches *n*, corresponding to the teeth of the ratchet, as specified, so as to turn freely therein in one direction and engaging in the other direction substantially as and for the purpose set forth.

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