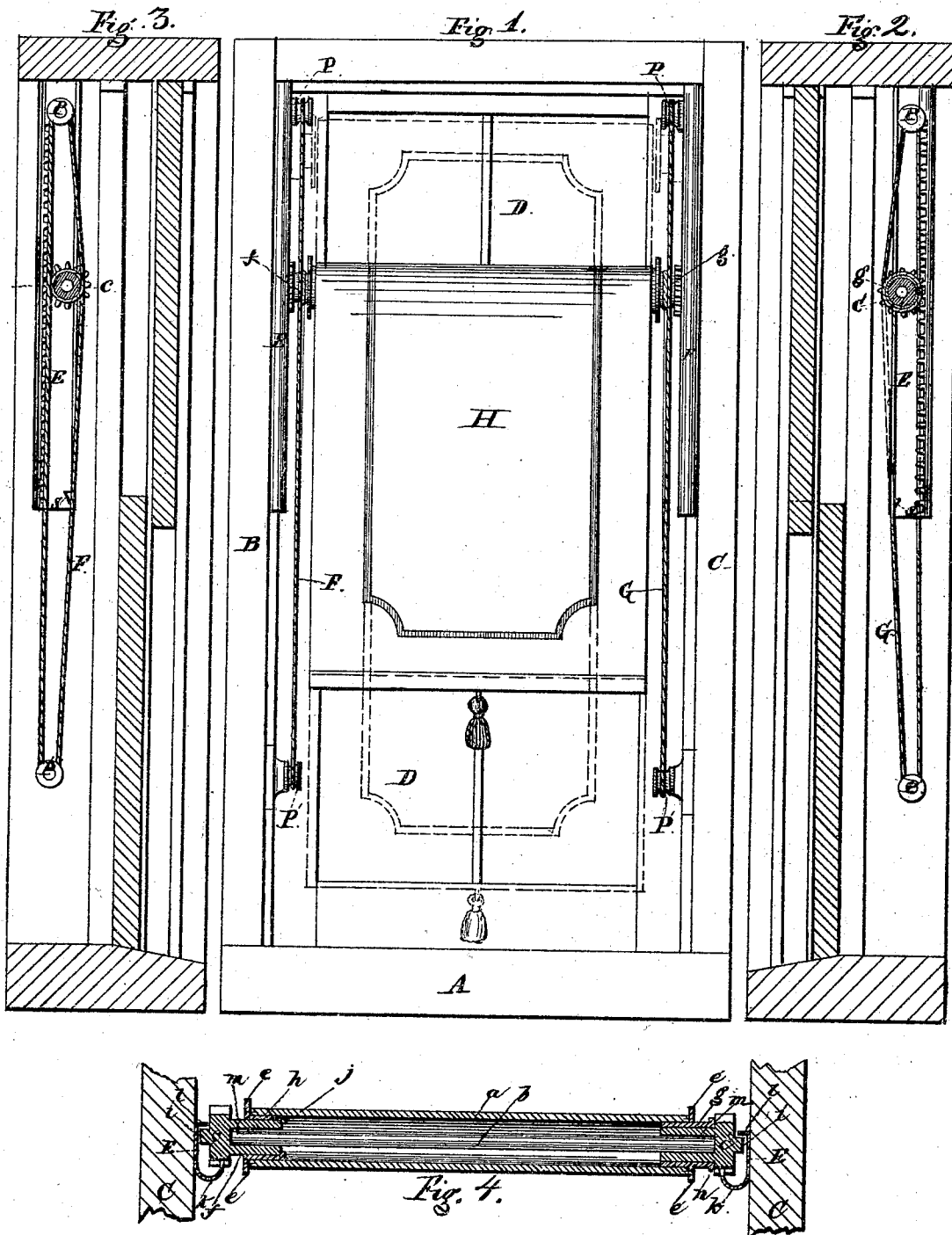


A. E. TRIPP.
CURTAIN FIXTURE.

No. 106,637.

Patented Aug. 23, 1870.



Attest:

W. L. Converse
Esq. H. Garnett

Inventor.

Albert E. Tripp.

United States Patent Office.

ALBERT E. TRIPP, OF SPRINGFIELD, OHIO.

Letters Patent No. 106,637, dated August 23, 1870.

IMPROVED CURTAIN-FIXTURE.

The Schedule referred to in these Letters Patent and making part of the same

I, ALBERT E. TRIPP, of the city of Springfield, in the county of Clark and State of Ohio, have invented certain Improvements in Curtain-Fixtures, of which the following is a specification.

My invention consists in a combination of rollers, cords, pinions, and ratchet-plates, in the construction of a useful and convenient device for raising and lowering curtains of windows, screens, &c., the object of the invention being to not only raise and lower the curtain upon the top roller, but also to lower the roller and curtain together, or raise them to any desired point, and retain them in place, for the purpose of admitting any required amount of light through the window, either below or above.

The roller upon which the curtain is wound is hollow, turning loosely upon a shaft of wood, which extends through it. Upon the outer ends of this shaft are pinions, gearing into ratchet-plates fastened to the casing on each side of the window, and extending from the top down to middle, or lower, if desired. These ratchet-plates are formed so that the ends of the pinion-shaft are prevented from slipping out.

An endless cord extends over fixed pulleys at the top ends of the ratchet-plates, and is wrapped one or more times around the ends of the roller, inside of the pinions, passing down the sides of the casing, around the usual tightening-pulleys or studs fixed to the lower part of the window.

The cord on one end of the roller is wrapped around the hub of the pinion, and, when operated, rolls the roller and curtain together, up or down, while the cord upon the other end is wrapped around a sleeve attached to the outside roller, and fitting loosely over the hub of the pinion on that end. When this cord is operated, the roller simply winds up or unwinds the curtain, at whatever point on the ratchet-plates the roller may be.

The pinions move together in raising the roller or lowering it, keeping it at all times parallel with the top and bottom of the window.

The roller is held in position by the tension of the cords and the meshing of the pinion-teeth into the ratchet-plates, together, the two exerting a sufficient pressure upon the roller to hold its weight, with the curtain, at any desired height.

The ratchet-plates, upon which the pinions work, are constructed of thin metal strips, having that edge upon which the teeth are cut bent outward with a curve or angle, and again inward, sufficiently to bring the teeth into the same plane with those of the pinions, and project them enough to give the pinions ample bearing. This form is given to economize metal in their manufacture.

The back edges of the ratchet-plates are bent outward, to confine the projecting ends of the pinion-

shaft, and to prevent the roller from being thrown out by any sudden shock. At their lower ends a spring stop prevents the roller from falling out of the ratchet-plates.

Figure 1 is a front elevation of a window to which my improved curtain-fixtures are applied.

Figure 2 is a sectional view of the same, showing the end of the roller, pinion, the ratchet-plate, and cord on the right side of the window.

Figure 3 is a sectional view, showing the same fixtures as attached to the left side.

Figure 4 is a horizontal section of the roller, inner shaft, pinions, and ratchet-plates, as attached.

In fig. 1—

A is the window-frame.

B the left, and C the right casing or jamb.

D is the sash in rear of the curtain.

H E are the ratchet-plates.

F, the cord on the left side of the window, which is wrapped around the hub F of pinion c, on the end of shaft b, and raises and lowers the roller and curtain together, the pinions c and c' running up or down on the ratchet-plates E when the cord F is pulled in either direction, the cord running over the pulleys P and P' at the top and bottom of the window-casing, which are in line with the hub f of the pinion.

G, the cord on the right side of the window, is wrapped around the sleeve g, on the end of the outer roller a, which fits loosely over the hub of pinion c'. This cord passes over similar pulleys, P and P', and when pulled down or up, turns the outside roller a, and winds up or unwinds curtain H, without regard to the position of the roller on the window, the pinions c and c' being held in position by the meshing of their teeth into the ratchet-plates E and the tension of cords F and G.

A spring stop, s, shown at the bottom of the ratchet-plates E, is fastened on the back edge, and projects through a slot far enough inside to arrest the downward motion of the ends i i of the pinions c and c', when the roller is drawn down to the bottom of the ratchet-plates, thus preventing it from falling out.

In introducing the roller into its position, it is pushed up into the groove formed by the teeth and back edge of the ratchet-plates from below, the spring stop s being beveled, for the purpose of allowing the projecting ends i i to pass over it.

It will be seen, by reference to the drawing, that the upper ends of the ratchet-plates E are made solid, as a seat for top pulleys P. As these pulleys are always required at the same point, and do not require any adjustment, as the lower ones, P', do, in putting up the fixtures, they are permanently attached to the top ends of the ratchet-plates.

The inner and outer rollers are made of wood, so

that they can be cut to suit the window. The pinions are fastened to the inner shaft or roller *b* by pins or screws, *m*, fig. 4.

e and *e'* are flanges turned up on the metal sleeves *h* and *g*, of the outer roller *a*, to prevent the curtain from getting off the ends of the roller in winding.

By reference to fig. 4, it will be observed that the sleeve *h* has a collar, *j*, on its inner end, turned inside, to keep it in place on the pinion-hub *f* and give sufficient space for the cord *F*.

The sleeve *g* has a collar, *n*, on its outer end, turned outward, to prevent the cord *G* from wear against the teeth of the pinion *c*.

The front or curved parts of the ratchet-plates, on which the teeth are cut, are seen at *k*, and the back edge, which turns over the projecting ends of the pinions, is seen at *l*, in the same figure.

A sufficient clearance is given to the pinions and their ends *i i* to move easily up or down inside the groove formed by the back edge and ratchet-teeth.

I claim as my invention—

1. A double curtain-roller, provided with pinions *c* and *c'* and sleeves *g* and *h*, each part operated independently by cords wound one or more times upon the ends of the inner and outer roller, or upon parts attached to the same, substantially as shown and described, for the purpose hereinbefore set forth.

2. The pinions *c* and *c'*, ratchet-plates *E*, sleeves *h* and *g*, with collars *j* and *n*, and flanges *e* and *e'*, constructed substantially as shown and described, for the purpose hereinbefore set forth.

3. The combination of ratchet-plates *E*, pulleys *c* and *c'*, and spring *s*, when constructed substantially as shown and described, for the purpose hereinbefore set forth.

4. The combination of all the parts, as shown and described, substantially as and for the purpose hereinbefore set forth.

ALBERT E. TRIPP.

Witnesses:

B. C. CONVERSE,
GEO. H. EARNEST.