(No Model.)

F. X. BRENNER.

AWNING.

No. 330,956. Patented Nov. 24, 1885.

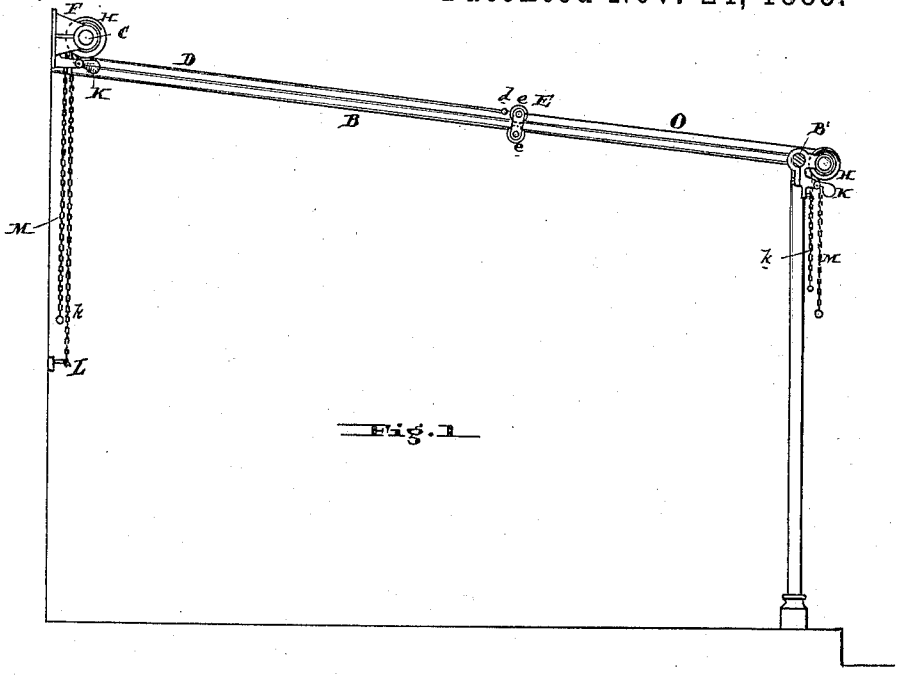


Fig. 1

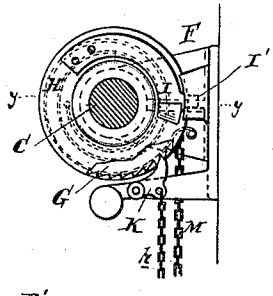


Fig. 2

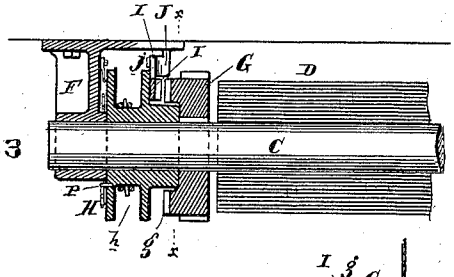


Fig. 3

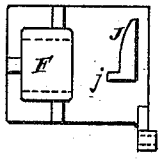


Fig. 4

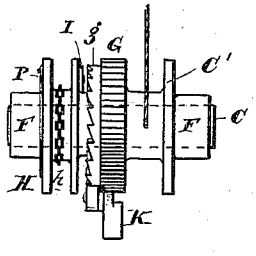


Fig. 7

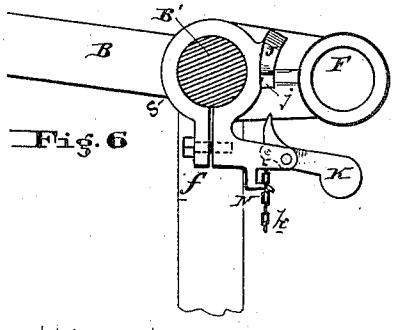


Fig. 6

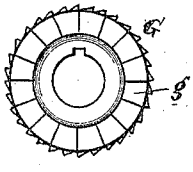


Fig. 5

Witnesses:
E. M. Breckinridge
J. Maguire,

Inventor
Francis X. Brenner
By his Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

FRANCIS X. BRENNER, OF PHILADELPHIA, PENNSYLVANIA.

AWNING.

SPECIFICATION forming part of Letters Patent No. 330,956, dated November 24, 1885.

Application filed September 9, 1885. Serial No. 176,568. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS X. BRENNER, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Awnings, of which the following is a specification.

My invention has reference to awnings; and it consists in certain improvements, fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

In carrying out my invention I provide the usual metal or wood awning-frame at one end with a roller or cylinder, upon which the awning is rolled, and from which it is drawn over the supporting horizontal slats or bars of the frame which is adapted to support it. The roller upon which it is secured is combined with suitable ratchet mechanism and an operating chain or cord, which, when pulled, operates the ratchet device and causes a rotation of the awning-roller. The ratchet device between the wheel upon which the operating-cord is secured and the roller to which the awning is secured is thrown out of connection at the terminal of each reverse rotation of the cord-wheel, so that normally, if not prevented by a ratchet and pawl, the awning may be drawn down or extended. A series of intermittent pulls upon the operating-cord will cause the roller to be rotated and the awning to be wound up. A similar device is arranged upon the other end of the awning-frame, only in this case a cord is wound upon the roller, which cord connects with the awning, whereby it may be positively moved in both directions and fixed in any position desired.

In the drawings, Figure 1 is a side elevation of an awning embodying my improvements. Fig. 2 is a cross-section of the ratchet-operating mechanism on line *x x*. Fig. 3 is a sectional plan view of same on line *y y*. Fig. 4 is a front elevation of the bracket therefor. Fig. 5 is a side elevation of the ratchet-wheel. Fig. 6 is a side elevation of the frame or bracket supporting the ratchet mechanism upon the outside of the awning-frame, and Fig. 7 is a front elevation of the said mechanism completed.

B represents the supporting slats or bars of the awning-frame, and of which there may be any number desired. These bars are arranged substantially horizontal, or, if desired, somewhat obliquely, and are supported at the outer end by a cross-bar, B′.

C is the roller upon which the awning D is secured and rolled, and is supported in suitable brackets, F. Secured to the roller C is the ratchet-wheel G, having upon its periphery ratchet-teeth, and also being provided upon one of its faces with crown ratchet-teeth *g*. Loosely journaled upon the roller C, and located between the ratchet-wheel G and the bracket F, is the operating-cord wheel H, having a groove, *h*, for the cord or chain M, one end of which is secured to the said wheel. Secured to the face of the said wheel adjacent to the ratchet-teeth *g* is a spring-pawl, I, having a tongue or extension, I′. Normally the spring-pawl I is pressed away from the ratchet-teeth *g* by the tongue I′ pressing against the cam projection J on the bracket F. As the cord M is pulled, the wheel H is rotated, and the moment it rotates sufficiently to enable the projection of the spring-pawl to pass beyond the cam J the said pawl springs into contact with the ratchet-teeth *g*, and further rotation of the wheel H rotates the ratchet-wheel G and the roller C also. A weighted or spring pawl, K, supported by the bracket F, works in contact with the ratchet-wheel G, and prevents cylinder C from being rotated and the awning unrolled or extended, excepting when said pawl is drawn away by a chain or cord, *k*, and caught upon a hook, L, as indicated in Fig. 1. This pawl also holds the ratchet-wheel G when operating the wheel H.

j is a stop which prevents the wheel H being rotated more than one revolution in either direction.

P is a spring, one end of which is secured to the bracket F and the other end to the wheel H, the object of which is to return the wheel H to its normal position and free the pawl I from contact with the ratchet-teeth *g* upon relieving the strain upon the cord or chain *k*.

The free end of the awning D is provided with a bar, *d*, to which is secured the guide-roller *e*, secured together by a strap, E, so arranged that the bars B are between them, to the end that the awning was not flat or be free to rise therefrom. The frame B′ is provided

with just such a ratchet take-up device as above described, with the exception that in place of the roller C winding up the awning the roller in this instance supports a groove-wheel, C′, and is adapted to wind up a cord or chain, O, connecting with the bottom of the awning at D, or the strap E, this construction being shown in Figs. 1, 6, and 7. In this case, as there is no support for a pin, L, for the chain *k*, as hereinbefore specified, therefore in this case a hook or pin, N, is provided on the frame or bracket F, as shown in Fig. 6, by which the chain may be caught, so as to hold the pawls in contact with the ratchet-wheel, and also in this case a clamp, *s*, may be used to secure the bracket F to the awning-frame B′.

By drawing away the pawl K at one end and operating the cord or chain at the other end the awning may be raised or lowered, or rotated or extended.

While I prefer the construction shown, I do not limit myself to the details thereof, as they may be modified in various ways without departing from my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the awning with its supporting-roller, a suitable catch to prevent its unwinding, an operating cord or chain, a chain-wheel, and ratchet devices, substantially as set forth, connecting the roller and chain-wheel, whereby a series of pulls upon the cord or chain winds up the awning, substantially as and for the purpose specified.

2. The combination of the awning with its supporting-roller, a suitable catch to prevent its unwinding, an operating cord or chain, a chain-wheel, and ratchet devices, substantially as set forth, connecting the roller and chain-wheel, whereby a series of pulls upon the cord or chain winds up the awning, and a similar ratchet-and-chain device connecting with the other end of the awning by a cord and adapted to positively move the awning in the other direction, substantially as and for the purpose specified.

3. The awning, in combination with a roller upon which it is wound, mechanism, substantially as described, to wind up the awning, a similar mechanism to unwind the awning, located at the other end thereof when extended, and connected therewith by a cord or chain, and locks at each end to prevent winding or unwinding of the awning except when desired, substantially as and for the purpose specified.

4. The combination of awning D, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, and chain M, substantially as and for the purpose specified.

5. The combination of awning D, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, pawl K, and chains M and *k*, substantially as and for the purpose specified.

6. The combination of awning D, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, having stop *j*, and chain M, substantially as and for the purpose specified.

7. The combination of frame B B′, awning D, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, and chain M, substantially as and for the purpose specified.

8. The combination of frame B B′, awning D, having guide-rollers *e*, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, and chain M, substantially as and for the purpose specified.

9. The combination of frame B B′, awning D, roller C, frame F, ratchet-wheel G, having teeth *g*, chain-wheel H, having spring-pawl I, spring P, cam projection J, chain M, and a similar ratchet-actuating device secured to the frame B′, and connected with the awning by a cord, O, substantially as and for the purpose specified.

10. The combination of the frame F, having clamp-jaws *f* and provided with pin N, with spring P, chain-wheel H, having pawl I, ratchet-wheel G, having wheel C′ and ratchet-teeth *g*, and shaft C, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

FRANCIS X. BRENNER.

Witnesses:
R. M. HUNTER,
WILLIAM C. MAYNE.