(No Model.)

C. BERNHARDT.

AWNING.

No. 342,568. Patented May 25, 1886.

FIG. 3.

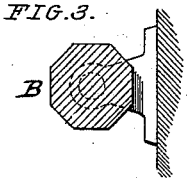
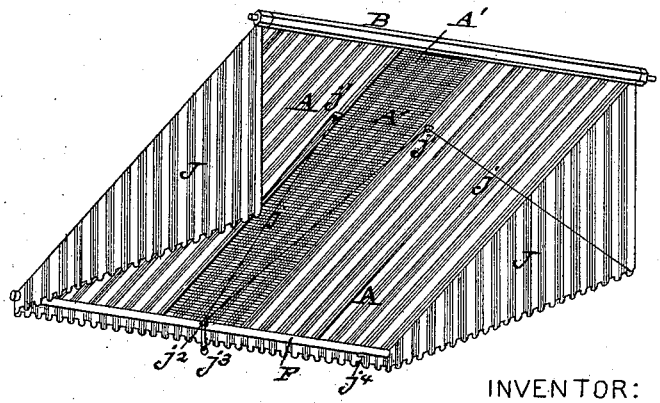


FIG. 1.

FIG. 4.

FIG. 2.



ATTEST:

M. J. Kenny

Geo. H. Artlur

INVENTOR:

Charles Bernhardt

per

Robert Burns

ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES BERNHARDT, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO MICHEAL J. KENNY AND GEORGE J. ADAM, BOTH OF SAME PLACE.

AWNING.

SPECIFICATION forming part of Letters Patent No. 342,568, dated May 25, 1886.

Application filed March 1, 1886. Serial No. 193,673. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BERNHARDT, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machine-Awnings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in that class of awnings in which the cloth or canvas is rolled up on a horizontal drum or roller when not required for use through mechanism extending to a position convenient to the operator; and the objects of the present improvements are, first, to provide means easy and convenient of operation for drawing the side wings or flies up against the under side of the awning-canvas, so that they can be readily rolled up with the same; second, to furnish means whereby the spread or extension of the awning to cover a more extended area is effected automatically by the operation of letting down or unfolding the awning; third, to provide means to obviate the tendency to buckling of the awning-canvas at its center, when the side wings or flies are rolled up along with it on the winding drum or roller; fourth, to afford means to cause the awning-canvas to "cut" and roll upon its winding-drum in an even and compact manner; and, fifth, to provide an improved loop or eye for the passage and attachment of the operating-cords employed in the present improvements. I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation illustrating my invention applied to the front of a building; Fig. 2, an under perspective view of the awning detached, illustrating the means employed to manipulate the side wings or flies; Fig. 3, an enlarged detail section of the winding drum or roll of the awning, and Fig. 4 a detail view of the attaching or guide eye for the operating-cords of the awning.

Similar letters of reference indicate like parts in the several views.

Referring to the drawings, A represents the main canvas portion of the awning arranged to wind upon the drum or roller B, journaled in suitable bearings attached to the building front, and provided with a chain-wheel, C, over which passes the operating endless chain D, which at its lower end passes over a similar chain-wheel, supported in a casing, E, within easy reach of the operator, and provided with suitable means for the attachment of the operating hand-crank *e*, and also a pawl or dog (not shown) for holding the parts at the required adjustment. The lower chain-wheel with its casing E is arranged with its axis at right angles to the axis of the upper chain-wheel C and winding-roll B, so that it can be arranged compactly against the building front and offer but very little obstruction at such point. Such arrangement also permits of the use of a much longer operating-crank, *e*, than could be employed were the axis of said chain-wheel arranged parallel with the building front.

The awning-canvas A is attached at its lower and front edge to the front rod or bar, F, of the awning-frame, having arms G, by which it is pivoted to the building front in manner as follows, to attain an enlarged extension of the awning out over the pavement: The inner ends of the arms G are pivoted to the sliding blocks *g*, that are arranged to move upon the vertically-arranged slide-bars H, permanently attached to the front of the building, as shown, the arrangement being such that when the awning is rolled up said blocks will be at their lowest position upon the slides H, as indicated in dotted lines in Fig. 1, and when the awning is lowered for use said blocks will be at their highest position, as indicated in full lines in Fig. 1, with the arms G horizontal, such raising of the blocks being accomplished automatically by a chain or rope, I, one end of which is attached to said block, and passing over a pulley, *i*, attached to the building, the other end being attached by an eye or other suitable means to the arms G, at a suitable distance from its pivot-point. By this construction the weight of the awning in its descent will automatically lift the inner ends of the arms G in a vertical direction toward a horizontal plane, and effect the required extension of the awning over the pavement. The side wings or flies, J, will be of the usual triangular form, permanently secured to the main awning-canvas A. To their extreme lower and inner

ends are attached the ends of the draw-cord *j*, which passes toward the center of the awning to eyes *j' j'*, and thence through an eye, j^2, upon the front bar, F, from which it depends in a loop, which is provided with a ring, j^3, so that after the wings are pulled up flat against the under side of the awning by drawing on the aforesaid pendent loop they can be secured in that position by engaging the ring j^3 upon a hook, j^4, attached to the front rod, F, near its end. When the awning is down and in use, the side wings or flies will be tied to the building in the usual manner to prevent flapping.

A is a central thickening or re-enforce strip secured to the under side of the main awning at its center, so as to fill up the same to a thickness equal, or nearly so, to that possessed by its outer portions when the wings or flies are drawn up against the same, the purpose being to prevent the buckling of the canvas as it is being rolled up due to the uneven thickness of its different portions.

The winding drum or roll B for the awning-canvas is made in the form of a polygon, preferably a hexagon or octagon, as I find such a shape, due to its projecting edges, causes the canvas to cut and roll very compactly into a small compass.

The eyes *j' j'* for the passage and attachment of the draw-cord *j* are made of a triangular form, so as to admit of a firm and substantial attachment to the awning-canvas, and at the same time hold and guide the draw-cord in its proper position.

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

1. The combination, with an awning the pivot-arms of which are adapted to move vertically at their inner ends, of a chain or cord connecting said inner ends with a moving portion of the awning, so that the movement of the awning in unfolding will automatically draw the inner ends of the pivot-arms up into a horizontal position to effect an outward extension of the awning-canvas, substantially as set forth.

2. The combination of the awning pivot-arm G, pivoted to a block, *g*, and slide H, with the chain or cord I, arranged to pass over the pulley *i* and connected to a moving part of the awning, essentially as and for the purpose set forth.

3. The combination, with a roll-up awning and mechanism, essentially as herein described, for operating, of the awning-roll B, made polygonal in cross-section, for the purpose set forth.

4. The combination of the main awning-canvas A, side wings, J, with the draw-cord *j*, arranged to pass through eyes *j' j'* and central eye, j^2, with its pendent loop provided with a ring, j^3, the parts being arranged to admit of the ring j^3 being engaged on a hook, j^4, when the side wings are drawn up against the under side of the main awning, as herein described, and for the purpose set forth.

5. In an awning of the type herein described, the awning-canvas A, provided with a central re-enforce strip, A', and side wings, J J, as described, and for the purpose set forth.

6. The combination, with an awning, as herein described, and the means for operating its side wings, of an eye, *j'*, of a triangular form, as described, and for the purpose set forth.

Signed at Chicago, Cook county, Illinois, this 11th day of January, 1886.

CHARLES BERNHARDT.

In presence of—

ROBERT BURNS,

M. J. KENNY.