

No. 764,897.

PATENTED JULY 12, 1904.

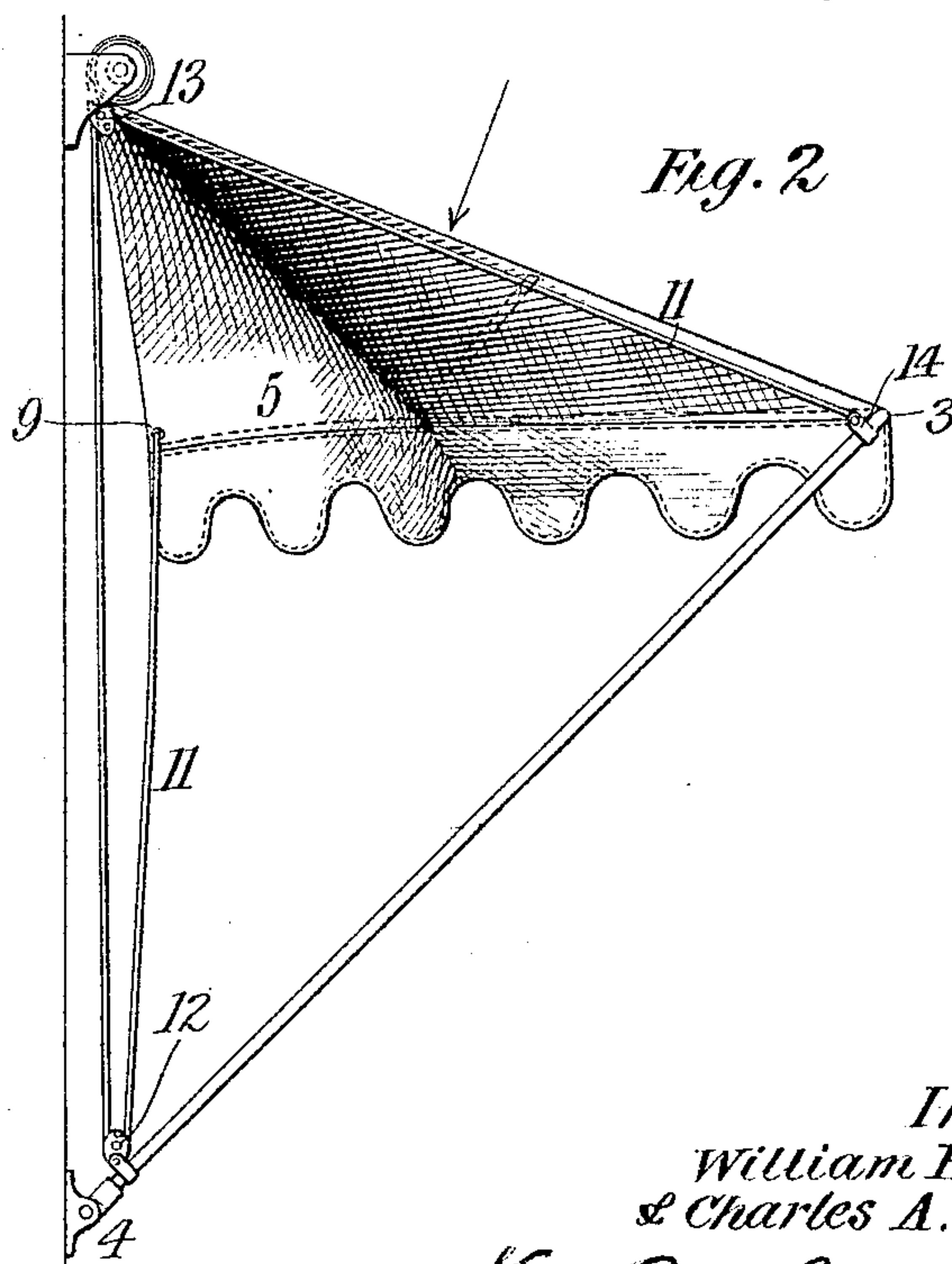
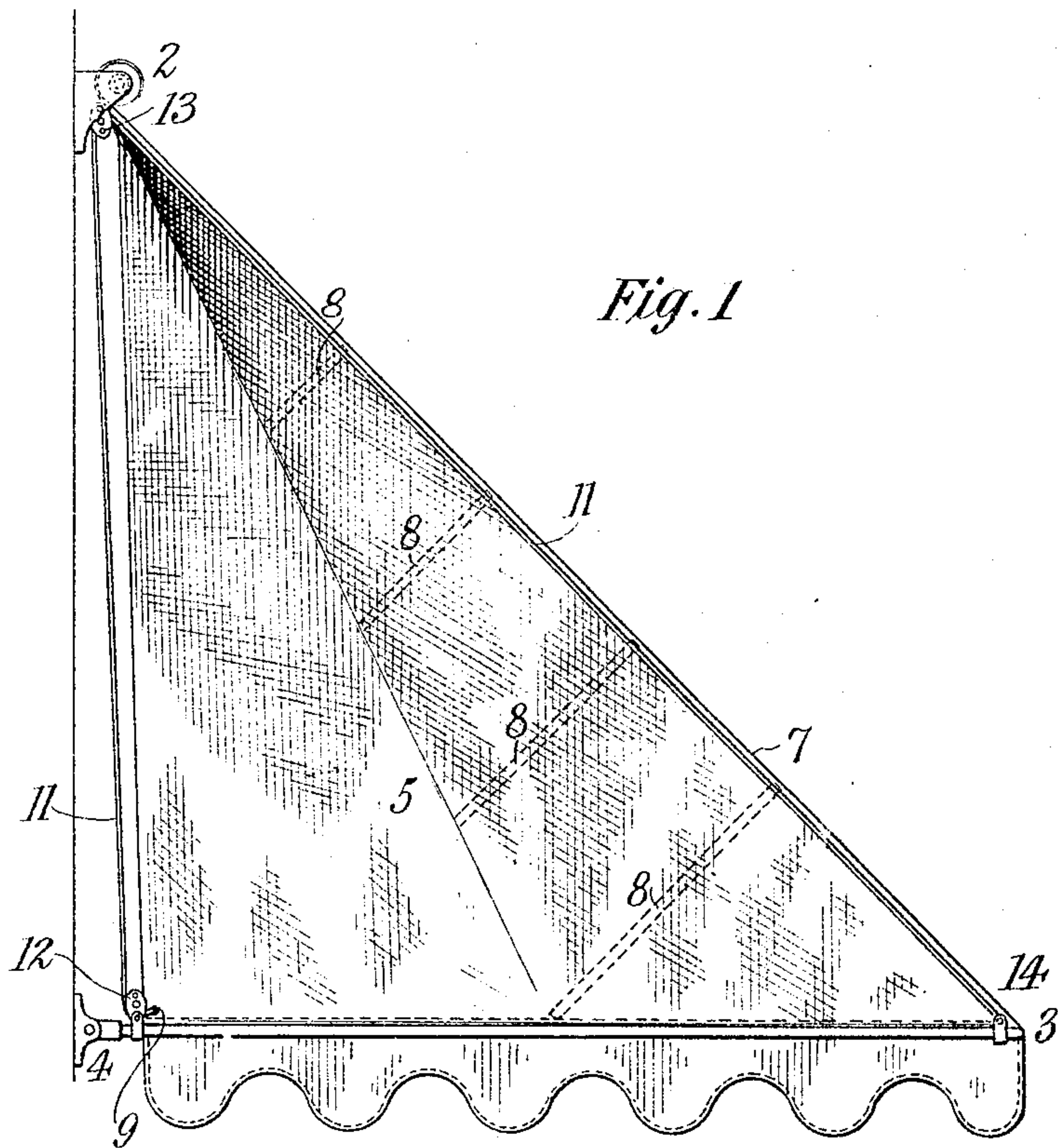
C. A. & W. E. METZGER.

AWNING.

APPLICATION FILED MAY 4, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



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UNITED STATES PATENT OFFICE.

CHARLES A. METZGER AND WILLIAM E. METZGER, OF RUTLAND,
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AWNING.

SPECIFICATION forming part of Letters Patent No. 764,897, dated July 12, 1904.

Application filed May 4, 1904. Serial No. 206,330. (No model.)

To all whom it may concern:

Be it known that we, CHARLES A. METZGER, and WILLIAM E. METZGER, both citizens of the United States, residing at Rutland, in the
5 county of Rutland, State of Vermont, have invented certain new and useful Improvements in Awnings, of which the following is a specification, reference being had to the drawings accompanying and forming part of
10 the same.

Our invention, subject of the present application, relates generally to awnings for windows, porches, doors, &c., and more particularly to awnings of the type which when
15 not in use are rolled up or otherwise stowed at the top of the window or other part of the structure which they are designed to protect.

Heretofore it has been common to make a
"roller-awning" in a simple curtain-like
20 form extending at an angle from the building without vertical end pieces, such as are found in the ordinary awning, which is closed by raising the frame thereof on pivots near the bottom of the awning. Various roller-awn-
25 ings have been devised which have these vertical end pieces adapted to be folded upon the body of the awning before the latter is rolled up; but all those with which we are familiar have not been entirely satisfactory in prac-
30 tice.

The object of the present invention is therefore to provide an awning with end pieces or curtains which fold automatically when the body of the awning is rolled up and which
35 are rolled with the body as fast as the latter is taken up. This result we secure in a very satisfactory way, so that the operator to raise the awning simply draws on a single operating-cord or releases spring devices connected
40 with the roller, which rotate the latter and so roll up the awning. Heretofore, so far as we are aware, it usually has been necessary to first manipulate the folding ends independently before the awning is rolled up. This
45 preliminary operation is more or less troublesome, especially to a person not familiar therewith, and always requires the exercise of some care to make the awning roll neatly and satisfactorily. In our invention, however, the

folding of the ends is automatic, and the operator need pay no attention to it whatever.

The invention itself consists of the novel features, combinations of elements, and arrangements of parts hereinafter described, and more particularly pointed out in the
55 claims. A typical embodiment of the same is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the awning in its lowered position, and Fig. 2 the same
60 when partly rolled up. Fig. 3 is a front elevation, and Fig. 4 is a section on line IV IV. Fig. 5 is a plan view of Fig. 2 looking in the direction of the arrow.

The fabric composing the awning is indicated by 1 and is secured to a suitable roller
65 2, upon which it may be wound. The roller is of ordinary form, rotated by a pulley or other suitable mechanism, or it may be a spring-roller of the general type used in win-
70 dows-shades, so as to take up the awning with little or no effort on the part of the operator.

The awning is secured by its front edge 3 to a U-shaped frame of the ordinary type, which latter is pivoted by its ends to fixed or
75 sliding pivots, as 4, at the wall of the building, as shown, so that the frame will rise on the pivots as the awning is wound upon the roller.

End pieces 5 of triangular shape are provided integral with or fastened to the front
80 of the awning. At the apex the end pieces are folded in upon the front portion, as clearly shown in Figs. 1, 2, 3, and 4, and the line of the fold is continued down across the end
85 piece to about the center of the base, as the point 6. Fastened to the end pieces and extending at right angles to the edge 7 are one or more rigid battens 8, reaching to the line of fold before mentioned. The lower parts
90 or bases of the ends are not secured to the U-shaped frame; but the corners 9 10 are fastened to flexible cords 11, which pass over pulleys or blocks 12 13 down to the angles of the frame, to which latter they are secured,
95 as at 14 14.

From the foregoing the operation of the device will be readily understood. For the

purpose of actuating the winding-up roller we have shown a drum 15 at one end of the same, on which is wound a tape or cord 16. When the latter is drawn down, the roller will be rotated and the awning wound thereon. The ends will fold in as the winding takes place, the folding being started by the permanent fold of the end at its apex, and the rigid battens will cause the fold to occur along the line of their lower ends. As the part in which the battens are secured cannot fold or be crumpled by reason of the battens, it will as the winding continues be brought flat against the front of the awning and so be received by the roller in a smooth straight condition. This operation will be clearly understood from an inspection of Figs. 2 and 5, in the latter of which the end pieces and battens are shown in dotted lines except where they appear on the roller. As the folding takes place the cord 11 will move through its blocks, permitting the lower section of the end piece to follow the rest until, as this section is taken up by the roller, it lies flat against the front part of the awning in the same manner as does the part in which the battens are secured. The cord 11 keeps the loose section under slight tension, so that its flatness and smoothness is assured. Otherwise it would hang straight down from the battens and in the rolling would be crumpled lengthwise. At the completion of the operation the end pieces are snugly and smoothly stowed in the roll. In lowering the awning the reverse operation takes place, and the tension of the cords 11 as they are drawn through their blocks by the drop of the U-shaped frame draws the end pieces out to their proper positions until the corners are brought close to the blocks 12. It will now be seen that the folding in of the end pieces as the awning is rolled up is entirely automatic and requires no attention or manipulation whatever by the operator. Likewise, they are extended into proper position perpendicularly to the awning-front as the awning is dropped by the tension-cords 11 until the corners are brought to the pivot-blocks 12, where they are always securely held.

The mechanical details of the invention may be varied considerably without departing from its proper scope, and we therefore do not consider ourselves limited to the specific form shown.

What we claim is—

1. In an awning, the combination of a front or body portion, means for taking up and storing the same, vertical end pieces for the front or body portion, and rigid battens in the end pieces for causing the end pieces to fold automatically upon themselves and upon the body portion as the latter is taken up, as set forth.

2. In an awning, the combination of a front or body portion, a roller for winding up the

same, and vertical end pieces, each secured at one edge to the body portion and each having a permanent fold upon the body portion adjacent the roller, as set forth.

3. In an awning, the combination of a front or body portion, a roller for winding up the same, vertical end pieces each secured by one edge to the body portion, and one or more battens in each end piece at right angles to the edge of the body portion, as set forth.

4. In an awning, the combination of a body portion, a roller for winding up the same, vertical end pieces each secured to the body portion by one edge and each having a permanent fold upon the body portion adjacent the roller, and one or more battens in each end piece at right angles to the edge of the body portion, as set forth.

5. In an awning the combination of a body portion, a roller for winding the same up, vertical end pieces each secured to the body portion by one edge, and each having a permanent fold on the body portion adjacent the roller, and one or more battens in each end piece at right angles to the body portion, extending therefrom to a line of fold from said permanent fold, as set forth.

6. In an awning, the combination of a body portion, a pivoted frame therefor, a roller for winding up the body portion, vertical end pieces each secured at one edge to the body portion, means for causing the end pieces to fold automatically on the body portion as the latter is wound up, and an automatically-adjustable tension-cord to hold the end pieces in position when the awning is open, as set forth.

7. In an awning, the combination of a body portion, a pivoted frame therefor, a roller for winding up the body portion, vertical end pieces each secured at one edge to the body portion, means for causing the end pieces to fold automatically upon the body portion as the latter is wound up, tension-cords secured to the frame at points removed from the pivots, blocks adjacent the roller, over which said cords pass, and blocks for the cord adjacent the pivots, said cords being secured to the end pieces at points adjacent the last-mentioned blocks, as set forth.

8. In an awning, the combination of a front or body portion, a roller for winding up the same, vertical end pieces of triangular shape, each secured at one edge to the body portion and each having a permanent fold upon the body portion adjacent the roller, and tension-cords permitting the end pieces to fold automatically upon the body portion as the latter is wound up and adapted to hold said end pieces in position when the awning is open, as set forth.

9. In an awning, the combination with a body portion, a roller for winding up the same and vertical end pieces each secured to the body portion by one edge, and each having a

permanent fold on the body portion adjacent
the roller, of one or more battens in each end
piece at right angles to the edge of the body
portion, blocks at each side of the awning ad-
5 jacent the roller, a second set of blocks adja-
cent the free corners of the end pieces, and a
tension-cord for each end piece passing over
the adjacent blocks and secured at its ends to

the free corner of the end piece and to the awn-
ing-frame, as set forth.

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