No. 705,214. Patented July 22, 1902.

L. A. DAUS.

SUPPORT FOR AWNING ROLLERS.

(Application filed Mar. 13, 1902.)

(No Model.)

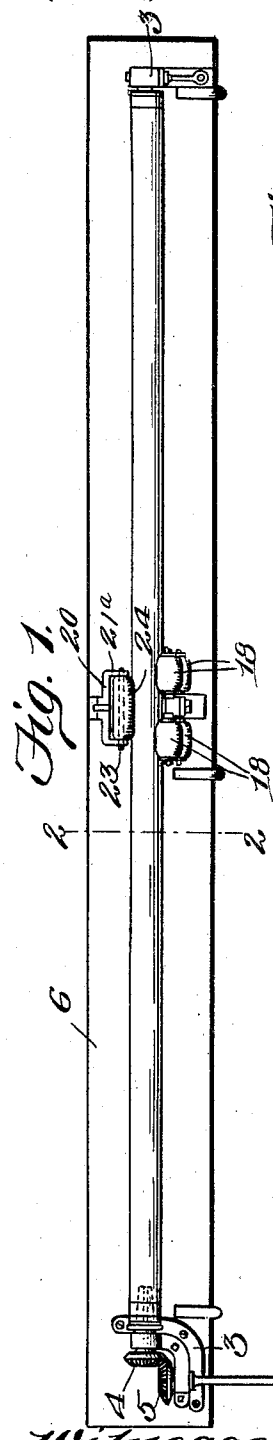


Fig. 1.

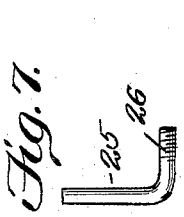


Fig. 7.

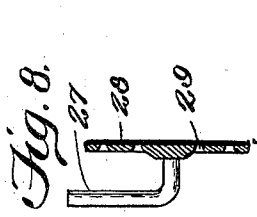


Fig. 8.

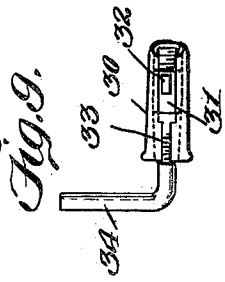


Fig. 9.

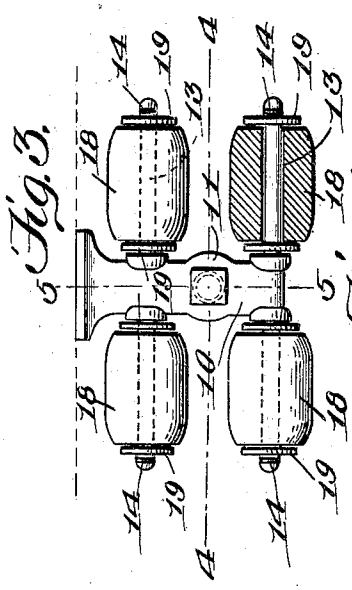


Fig. 3.

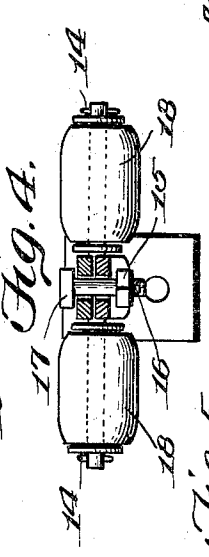


Fig. 4.

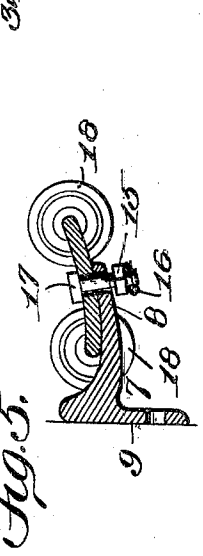


Fig. 5.

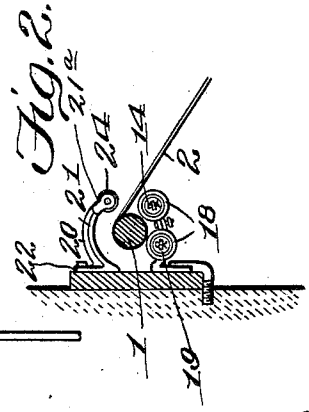


Fig. 2.

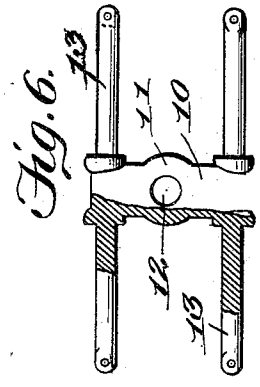


Fig. 6.

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LOUIS A. DAUS, OF EVANSVILLE, INDIANA.

SUPPORT FOR AWNING-ROLLERS.

SPECIFICATION forming part of Letters Patent No. 705,214, dated July 22, 1902.

Application filed March 13, 1902. Serial No. 98,084. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. DAUS, a citizen of the United States, residing at Evansville, Indiana, have invented new and useful Improvements in Supports for Awning-Rollers, of which the following is a specification.

This invention relates to awnings, and particularly to that class of awnings known as "roller-awnings;" and it has for its object to provide a novel and improved support for the roller about which the awning is wound, so constructed that the roller will be prevented from sagging between its ends and which will readily accommodate itself to the folding, doubling, or crimping of the canvas or cover that may occur as the latter is wound about the roller.

To these ends my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a view in front elevation of an awning-roller supported in operative position and having my improved supporting attachments applied thereto. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is an enlarged top plan detail view of the bottom center support. Fig. 4 is a transverse sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a similar view taken on the line 5 5 of Fig. 3. Fig. 6 is a detail view of the roller-frame, a portion thereof being shown in section; and Figs. 7, 8, and 9 are detail views illustrating different forms of cleats or stirrups for supporting the awning-roller in place on a building.

Referring to the drawings, the numeral 1 indicates the awning-roller, to which the upper edge of the canvas or cover 2 is attached, as usual. Said roller is journaled at its opposite ends in brackets or bearings 3, which may be constructed in any suitable manner and form no part of the present invention, and said roller is provided at one of its ends with a beveled gear 4, which gears with a similar gear 5, that is adapted to be rotated by any suitable mechanism for the purpose of rotating the roller and winding up the awning. The bearings or brackets 3 may be attached directly to the front of the building by any suitable means, or they may be attached to a board or plank 6, which itself may be attached to the front of the building.

In practice the roller 1, which is usually made of wood, is apt, owing to its weight and the strain of the awning, to sag between its ends or be deflected from a true straight line, and this is prevented by the novel and improved means which I will now describe.

Attached to the board 6 or to the front of the building intermediate the ends of and behind the roller 1 is a bracket-arm 7, consisting of a metallic arm preferably slightly concaved on its upper side and provided at its outer end with a perforated circular bearing 8. Said arm at its inner end is provided with a flat vertical flange 9, which is bolted or otherwise rigidly attached to the board 6 or to the front of the building. Movably supported on the bracket-arm 7 is a roller-frame comprising a bolster consisting of a metallic arm 10, preferably concavo-convex in shape, as shown, and provided midway between its ends with a circular boss 11, provided centrally with a bolt-hole 12. Said bolster is preferably cast from malleable metal and is provided at its opposite ends with spindles 13, said spindles being four in number, two at each end of the bolster, the spindles at each end of the bolster projecting in opposite directions at right angles to the longitudinal axis of the bolster and in alinement with each other. The spindles 13 are cast integrally with the bolster 10 and are each provided at their outer ends with a perforation for the reception of a cotter-pin 14. The bolster is loosely secured in place on the bracket-arm 7 by a bolt 17, which passes through the bolt-hole 12 in the boss 11 of the bolster and through the corresponding bolt-hole formed in the bracket-arm 7. The bolt is of less diameter than the said bolt-holes, and on its lower threaded end is screwed a nut 15, and passed through the lower end of said bolt beneath said nut is a cotter-pin 16. The cotter-pin is inserted in the bolt 17 at such a point that when the nut 15 rests against said cotter-pin the upper side of said nut will be disposed a slight distance below the under side of the bracket-arm 7. By this means the roller-frame is attached to the bracket-arm by a loose connection which will

not only permit of the roller-frame having an oscillating movement in a horizontal plane, but will also permit of said roller-frame having an oscillating movement in a direction at an angle to a vertical plane. In other words, the roller-frame will be capable of having a limited universal movement relatively to the fixed and rigid bracket-arm which supports it, for the purpose hereinafter explained. Journaled on each of the spindles 13 is a roller 18, which may conveniently be formed of wood and which is preferably of a substantial oval or barrel shape. Metallic washers 19 are arranged on the spindles adjacent to each end of each of the rollers, and said washers and rollers are held loosely in place on their spindles by the cotter-pins 14, inserted in the spindles, as before described.

In practice the bracket-arm 9 is attached to the board 6 or to the front of the building intermediate the ends of the roller and at such a point that when the awning is down the awning-roller will slightly rest upon the rollers 18. Also attached to the board 6 or to the front of the building is a bracket-arm 20, comprising a curved metallic arm 21, provided at its inner end with a vertical flange 22, which may conveniently be bolted or otherwise suitably secured to said board or front of the building, and said arm is provided at its other end with downwardly-inclined perforated lugs 21^a, in which are journaled the opposite ends of a rod 23, on which is fixed a cylindrical roller 24. The bracket-arm 20 is attached to the board 6 or to the front of the building in such manner that the roller 24 will overhang the outermost rollers 18, as most clearly shown in Fig. 2 of the drawings, and said bracket-arm may either be attached directly above the rollers 18, as shown in Fig. 1, or I may employ two such bracket-arms and arrange them on each side of the central rollers.

The operation of the awning is as follows: Let it be assumed that the awning is down or unwound from the roller and that it is desired to raise the awning or roll it up about its roller. The roller will then be rotated by means of the gears 4 5 and suitable mechanism for operating said gears, and as the roller rotates and winds the cover or canvas about it the roller and the canvas as it winds thereon will freely rotate on the rollers 18, said rollers 18 supporting the awning-roller intermediate its ends, thus preventing the awning-roller from sagging in the center, and thereby causing it to be operated freely and to uniformly and evenly wind thereon the awning-cover. Should the awning-cover as it is being wound upon the roller fold, double, or crimp upon itself, the rollers 18, carried by the roller-frame, will have a universal movement in the manner before described and will assume such position as will accommodate themselves to the inequalities caused by such uneven winding of the awning-cover. As before described, the spindles 13, upon which the rollers 18 are journaled, are cast integrally with the bolster 10. Hence neither one of the rollers can have any oscillating or swinging movement independently of the others, and therefore said rollers will always form a true and proper support for the awning-roller and the awning-cover wound thereon. The roller or rollers 24 overhang the awning-roller in front and prevent said roller from being displaced from its seat on the roller 18 by the strain produced on the awning-roller by the awning-cover.

For the sake of differentiating one set of the rollers from the other I denominate the bracket and roller-frame and the rollers 18 a "bottom center support," and the bracket-arm 20, with its roller 24, a "top center support." In the drawings I have shown but a single bottom center support and a single top center support, and I have shown the latter arranged directly above the former; but in some cases I may employ two top center supports and arrange them either side of the bottom center support, or, again, I may employ two or more bottom center supports and arrange a top center support directly over each one of them or may arrange top center supports on each side of the several bottom center supports, the length of the awning-roller determining the number of the supports employed. As has been before stated, the brackets of the top and bottom center supports may either be attached directly to the front of the building or they may be attached to a board or plank 6. In the latter case I may employ either of the several stirrups or cleats shown in Figs. 7, 8, and 9 of the drawings. Where the building is provided with an iron frame or front, I in practice drill suitable bolt-holes at the proper point in the iron structure and thread the same and then screw into said holes the cleat or stirrup shown in Fig. 7 of the drawings, which consists of a metallic rod 25, bent at a right angle and threaded at one end, as at 26, the threaded ends of such cleats or stirrups being screwed into the threaded holes formed in the iron structure and the cleats or stirrups turned up into the position shown in Figs. 1 and 7. The awning-roller, with its several attachments, may first be attached to the board and the board then slipped down between the upright portion of the cleats and the adjacent portion of the building, as most clearly shown in Figs. 1 and 2 of the drawings. When the building to which the awning is to be applied is provided with a wooden front, the cleats or stirrups like those shown in Fig. 8 are employed, said cleats or stirrups each consisting of a right-angled metallic rod 27, provided at the end of its horizontal portion with a flat flange 28, having screw-holes 29. Said cleats or stirrups are screwed in place at the proper point by screwing the flanges 28 to the wooden front of the building in such manner that the rods 27 will stand

upright, as shown in Fig. 8. The board or plank 6 is then slipped in place in the same manner as before described. When the front of the building is composed of brick or stone, suitable holes are bored in the bricks or stone at the proper point and the cleat or stirrup shown in Fig. 9 is inserted in said holes. This cleat is of well-known and ordinary construction and is readily purchased on the market. It may be briefly described as consisting of a split tube 30, having arranged therein an expansion-sleeve 31, provided with projections 32, which project between the adjacent edges of the split tube. The expansion-sleeve 31 is interiorly threaded, and screwed therein is the threaded end 33 of a right-angular rod 34, similar in all respects to the cleat or stirrup shown in Fig. 7. After the tube has been inserted in the hole drilled in the stone or bricks for it the rod 34 is turned, thus forcing the expansion-sleeve 31 outward and expanding the split tube 30 and firmly fixing it in the stone or brick work. The rods 34 are finally turned up to a vertical position, after which the board or plank 6 may be slipped in place in the manner hereinbefore described with reference to the cleats or stirrups shown in Figs. 7 and 8. Other means for supporting the board in place will obviously suggest themselves to those skilled in the art and may be employed, and no claim is made to the stirrups shown in Figs. 7, 8, and 9 of the drawings, as the same form no part of the present invention.

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

1. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of the awning-roller, of a bolster pivoted to and universally movable on said bracket-arm, rigid spindles projecting laterally from the opposite sides of said roller-frame, and rollers journaled on said spindles and arranged to support the awning-roller between them, substantially as described.

2. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of and beneath the awning-roller, of a roller-frame loosely connected to and universally movable on said bracket-arm, four rigid spindles carried by said frame and projecting at right angles from the opposite sides of each end of said frame, and rollers journaled on said spindles and arranged to support the awning-roller between them, substantially as described.

3. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of the awning-roller, of a bolster pivoted to and universally movable on said bracket-arm, rigid spindles projecting laterally from the opposite sides of said roller-frame, rollers journaled on said spindles and arranged to support the awning-roller between them, and a bracket constructed to be rigidly fixed above the awning-roller and supporting a roller above and in front of the awning-roller, substantially as described.

4. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of the awning-roller, of a roller-frame loosely supported and universally movable on said bracket-arm, said frame comprising a bolster provided at each of its opposite ends with two laterally and oppositely projecting rigid spindles, means loosely connecting said bolster centrally to the end of the bracket-arm, and rollers journaled on said spindles, substantially as described.

5. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of the awning-roller, of a roller-frame loosely supported and universally movable on said bracket-arm, said frame comprising a bolster provided at each of its opposite ends with two laterally and oppositely projecting spindles formed integrally with said bolster, rollers journaled on said spindles, and a pivot-bolt loosely pivoting said bolster centrally to the end of the bracket-arm, substantially as described.

6. In a device for supporting awning-rollers, the combination with a bracket-arm constructed to be rigidly secured in place intermediate the ends of the awning-roller and having a bolt-hole in its outer end, of a roller-frame loosely seated and universally movable on said bracket-arm, said frame comprising a bolster provided centrally with a bolt-hole and provided at each of its opposite ends with two laterally and oppositely projecting integral spindles, rollers journaled on said spindles and a headed bolt loosely passing through said bolt-holes and provided on its lower end with a nut, said nut being arranged on the bolt at a point below the under side of the bracket-arm and said bolt being of less diameter than the bolt-holes, substantially as shown and described and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS A. DAUS.

Witnesses:
J. WILL. GLEICHMAN,
ARMAND R. EMRICH.