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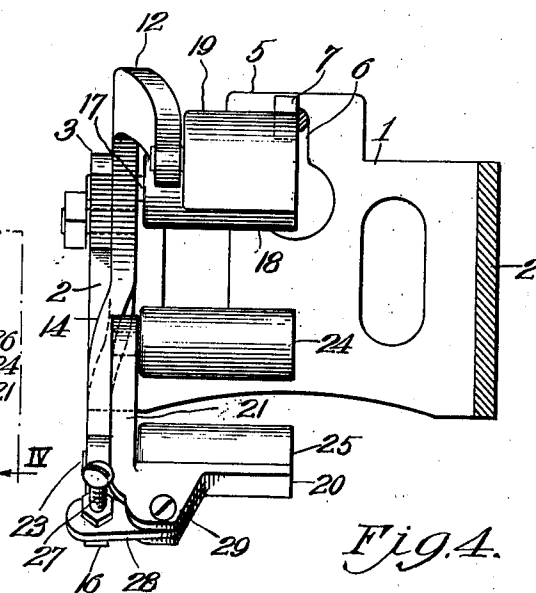
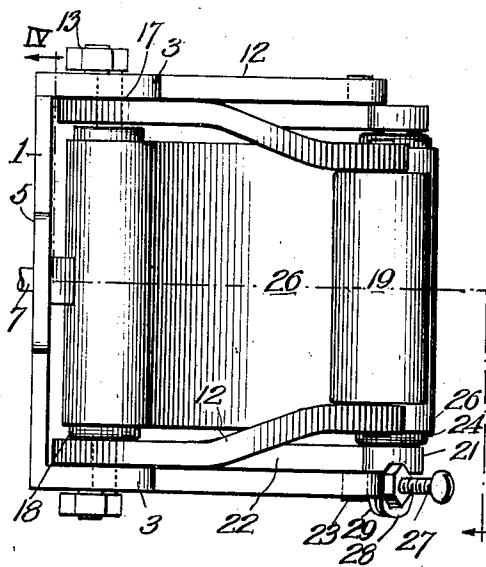
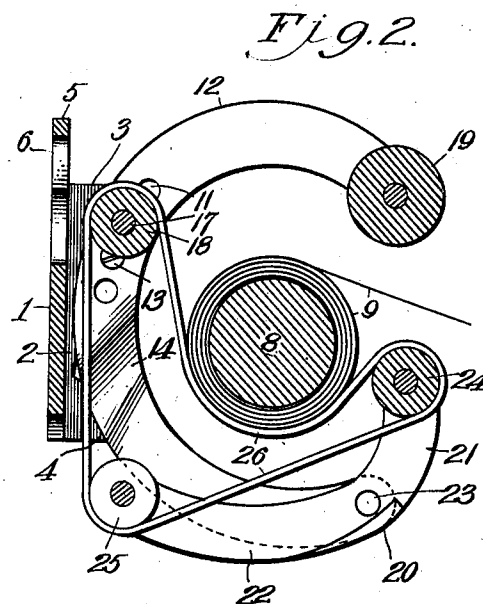
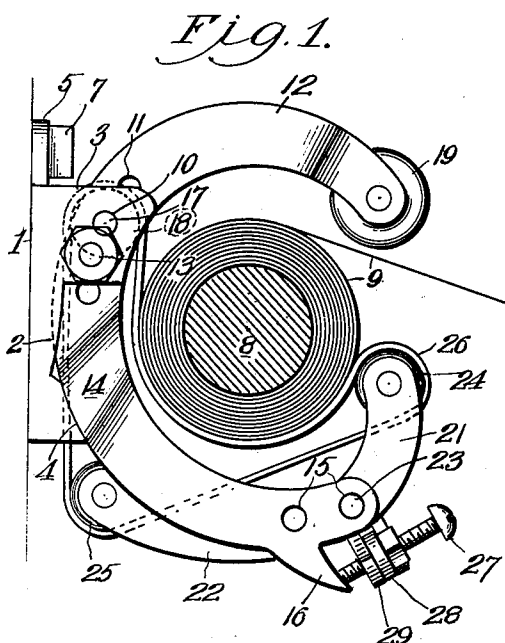
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2,220,311

CENTER SUPPORT FOR ROLLER AWNINGS

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2 Sheets-Sheet 1



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Fig. 5.

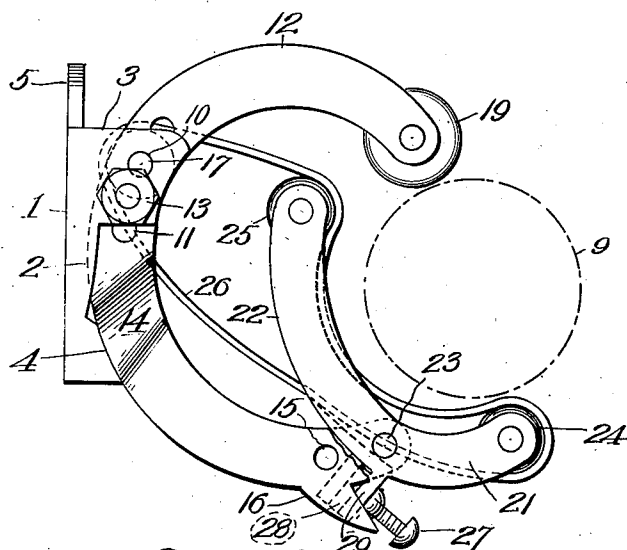


Fig. 6.

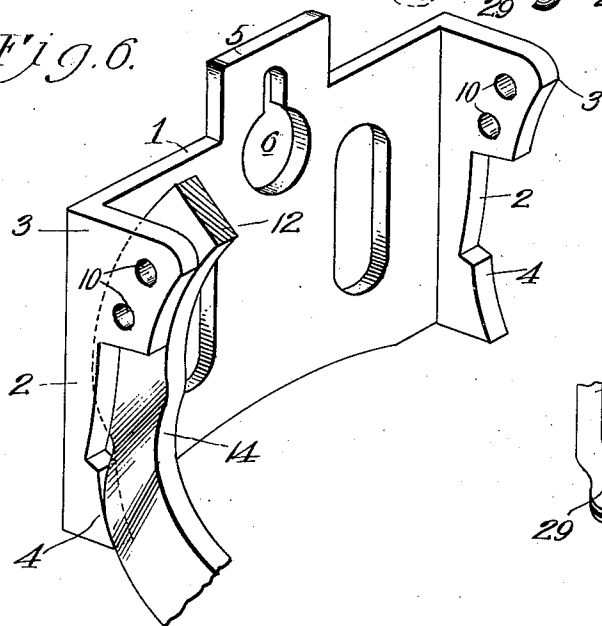
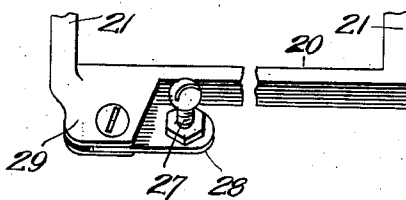


Fig. 7.



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CENTER SUPPORT FOR ROLLER AWNINGS

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8 Claims. (Cl. 156—44)

This invention relates to center supports for roller awnings and has for its general object to produce a catenary or sling-suspension endless belt support so mounted that the length of the weight supporting run of the belt can be adjusted against the load of the awning roller without likelihood of placing unequal tension along the opposite side edges of the supporting belt. It has been found that if the belt is subjected to uneven tension along its side edges it results in the uneven wrapping or winding of the awning fabric around the awning roller.

Another object of the invention is to produce an improved type of center support, regardless of whether the awning roller is carried by a belt or by a series of separate rollers, in which the spacing between the usual overlying guard roller and the underlying support, remains the same for equal diameter awning rollers, regardless of the pitch of the awning when spread. With the center supports now in use, given a pair of equi-diameter awning rollers, the spacing of the guard roller for a flat pitch must be greater than for a steep pitch; but with the support of the invention the spacing will remain the same, the support as a whole bearing an arcuate adjustment with relation to the building front.

A further object is to produce a center support of such nature that the front portion of the support can move downwardly to a lower horizontal plane so that an awning roller may be placed on the support by moving it horizontally inwardly toward the building front, or may be placed on the support from below rather than from a plane above the support. With all center supports with which I am familiar, the awning roller, if placed after the support has been positioned, must be lowered onto the support from above, the usual guard roller being removed or swung to one side to accommodate the placing of the awning roller. In the present invention, on the other hand, the guard roller may be in a fixed horizontal plane. This construction is of special advantage where the awning is mounted within a recess or boxing as employed in modern store fronts.

A further object of the invention is to produce a belt type center support in which the tendency of the belt tensioning or take-up mechanism to thrust outwardly on the awning roller is to some degree compensated by having a differential arrangement. The mounting is such that an inward thrust on the awning roller is so related to the take-up adjustment, that the movement of the axis of the awning roller is substantially vertically upward, since the maintenance of the axis

of the roller in line with its end journals is the desideratum in all center supports.

With the general objects named in view and others as will hereinafter appear, the invention consists in certain novel and useful features of construction and organization of parts as hereinafter described; and in order that it may be fully understood, reference is to be had to the accompanying drawings, in which:

Figure 1 is a side view of a center support embodying the invention, the wound awning being indicated in section.

Figure 2 is a central vertical section through the center support and awning roller.

Figure 3 is a top plan view with the awning omitted.

Figure 4 is a view on the line IV—IV of Figure 3.

Figure 5 is a side elevation of the center support adjusted to receive an awning roller.

Figure 6 is a perspective view of the wall bracket and a part of the frames carried thereby.

Figure 7 is a fragmental front view of the center support as it appears preliminary to adjustment to receive an awning roller.

Referring to the drawings in detail, a wall bracket or plate comprising a body portion 1, shown as having its side edges formed with forwardly-projecting vertical flanges 2, the upper ends of the flanges being prolonged to provide ears 3, and the lower ends shaped to provide downwardly and forwardly sloping stops or abutments 4. Although the wall bracket may be mounted fixedly to the wall or building front, in its preferred form as shown, it is provided with a central upstanding top lug 5 having an inverted key-hole opening 6 to rockingly fit over and be supported on the end of a headed bolt 7 carried by the building front adjacent an awning roller 8 on which fabric 9 is wound. The support may thus rock to accommodate inclination of the axis of the awning roller.

Each ear 3 has pairs of alined openings 10, and one pair of the openings of the two ears are brought into registry with one pair of a series of alined openings 11 in a pair of vertically disposed arms 12, shown as of generally C-shape, one arm 12 fitting against the inner faces of each of the ears 3, and bolted in adjustable relation thereto as at 13, so that said arms provide a frame to receive support elements of any desired type for the awning roller 8. By shifting the position of the registering pairs of holes, it will be apparent that the frames 12 have arcuate adjustment with relation to the supporting bracket 1, and when

fixed in position comprise an extension of the wall bracket.

In the form of the device as shown, each of the side arms or members 12 of the arcuately adjustable frame, at their lower ends, are offset laterally outward as at 14 so that such lower portions of the arms are in the vertical plane of the stops or abutments 4 and preferably rest thereagainst to take some of the load off the securing bolts 13. Although the frames 12 are described as equipped with a belt-type awning support, their arcuate mounting is useful with other types of supports for awning rollers. As shown, each of the members 12 has openings 15 at its lower front end, and one of said members is formed with a depending abutment lug 16. Any pair of openings 11 in the frames 12 constitute supports for a rod or shaft 17 carrying a horizontal roller 18 spanning the space between the upper intermediate part of said arms 12. In the construction shown the nuts of the bolt 13 form stops preventing endwise slipping of the rod 17, although the shaft may be otherwise secured, if desired. The upper outer ends of the frame arms 12 are shown as offset laterally inward both of the intermediate spacing and the wider bottom spacing of said arms, and at their ends carry a guard roller or member 19, although it will be apparent that the guard roller may be of any desired length. Thus it will be evident that the arcuately adjustable frames 12 may carry any preferred awning roller support, and that the awning roller support and the customary guard roller will be arcuately adjusted to suit the pitch of the awning when spread without change of their positions relative to each other, since the whole center support will be adjusted at right angles to the plane of the building front.

A rock or sub-frame for adjustment for belt-tensioning purposes, comprises a cross-bar 20, and pair of front arcuate arms 21 and rear arcuate arms 22. The sub-frame is disposed between the lower or offset portions of the arms 12 of the arcuately adjustable frame and is movably mounted therein. In the construction shown the sub-frame is rockingly mounted on a shaft or trunnions 23 engaging aligned openings 15 in the lower ends of the frame 12. Carried by the front and rear arms 21-22 respectively, of the sub-frame, are belt rollers 24 and 25 of substantially the same dimensions as the roller 18.

In the construction here shown the rollers 18, 24 and 25 are encircled by an endless belt 26, the run of the belt between rollers 18 and 24 forming a sling or support for the awning roller 8, and the roller 25 being adjustable in position under the load imposed by the awning roller, to vary the length of the supporting run of the belt. To effect this adjustment of the center of the awning roller to insure that it is held in substantial alignment with its end bearings, the sub-frame is equipped with an adjusting bolt 27 abutting the lug 16. The bolt is threaded through an arm 28 projecting laterally from the sub-frame, so that as the bolt is turned in the proper direction, the arm 28 is thrust away from the lug, and hence the rock frame is turned on its pivots 23. In the present exemplification of the invention, the roller 24 is journaled in the sub-frame to simplify the construction and also to thrust inwardly on the awning roller 8 when the belt is tightened to tend to confine the lift of the awning roller axis to a vertical line and to approach the overlying guard roller 19. If roller 24 should be journaled in the frame 12 rather than in the rocking frame, the belt tightening operation tends to move the

axis of the awning roller upwardly and outwardly without the counter-action of the inward thrust of the preferred construction illustrated.

The arm 28 is pivoted within a bifurcated lug 29 of the rock frame and can be swung laterally to withdraw the bolt 27 from the path of the lug 16. This is done to permit the rock frame to be swung as shown in Figure 5, until the roller 24 is far enough away from the roller 19 to permit the awning roller 8 to be passed sidewise between rollers 19 and 24, and into position on the supporting belt. When this position of the awning roller is effected, the rock frame swings back to normal position as shown in Figure 1. The arm 28 is then swung to reengage the bolt 27 with the abutment lug 16 thereby arresting and holding the rock frame against further movement and with the rollers 19 and 24 close enough to guard against any possible dislocation of the awning roller from the center support.

From the above description, it will be apparent that I have produced a construction embodying all of the features of advantage set forth as desirable, and while I have described and illustrated the preferred embodiment, it is to be understood that I reserve the right to all changes within the spirit and scope of the appended claims.

I claim:

1. A center support for roller awnings, comprising a supporting arm for attachment to a building front, a second arm movably related to the first arm, a plurality of parallel rollers, some journaled in the supporting arm and others in the movable arm, an endless belt encircling said rollers and adapted to support an awning roller on one of its runs, and means reacting in opposite directions against the supporting and movable arms to effect positioning of the latter to bodily shift the movable arm belt rollers under the load imposed by the awning roller while maintaining the axis of such belt roller parallel to the axes of the other belt rollers.

2. A center support for roller awnings comprising a supporting arm, a second arm rockingly mounted in the supporting arm, a pair of parallel belt rollers journaled in the rocking arm and adapted to have their horizontal axes respectively in vertical planes behind and in front of the vertical plane of an awning roller, a belt roller journaled in the supporting arm parallel to the other belt rollers, an endless belt encircling all of said rollers and supporting the awning roller between belt rollers respectively journaled in the supporting and rocking arms, and means reacting in opposite directions against the supporting and rocking arms to bodily rock the latter to tension the belt against the load of an awning roller.

3. A center support for roller awnings comprising a wall bracket adapted to be secured to a building front, a supporting arm carried by the wall bracket, said arm having extensions adapted to overlie and underlie an awning roller, a guard roller horizontally journaled in the outer end of the upper extension in a vertical plane in front of the vertical plane of the axis of the awning roller, awning roller-supporting means carried by the lower extension of the arm, the opposite sides of said supporting means being in vertical planes at opposite sides of the vertical plane of the axis of the awning roller, the distance between the upper front side of the supporting means and the overlying guard roller normally being less than the diameter of the awning roller, and means for swinging the sup-

porting means downwardly and outwardly to increase the vertical distance between its upper front side and the overlying guard roller to permit of entry or exit of an awning roller.

5 4. A center support for roller awnings comprising a wall bracket adapted to be secured to a building front, a supporting arm carried by and arcuately adjustable on the wall bracket in a plane at right angles to the plane of the building front, said arm having extensions adapted to overlie and underlie an awning roller, a guard roller horizontally journaled in the outer end of the upper extension, and awning roller-supporting means carried by the lower extension, the distance between the front upper end of the awning roller-supporting means and the guard roller remaining constant on arcuate adjustment of the supporting arm on the wall bracket to accommodate change in awning pitch.

20 5. A center support for roller awnings comprising a wall bracket adapted to be secured to a building front, a supporting arm carried by and arcuately adjustable on the wall bracket in a plane at right angles to the plane of the building front, said arm having extensions adapted to overlie and underlie an awning roller, a guard roller horizontally journaled in the outer end of the upper extension, awning roller-supporting means carried by the lower extension, the distance between the front upper end of the awning roller-supporting means and the guard roller remaining constant on arcuate adjustment of the supporting arm on the wall bracket to accommodate change in awning pitch, and means to increase the distance between the awning roller-supporting means and the guard roller to permit of placement or displacement of the awning roller.

40 6. A center support for roller awnings comprising a supporting arm adapted to project out-

wardly from a building wall and underlie an awning roller, a belt roller journaled in said arm, an arm rockingly mounted on the supporting arm, a pair of belt rollers journaled in said rocking arm, one of said rollers being in front of the axis of the awning roller, an endless belt encircling all of said belt rollers and adapted to support the awning roller on one of its runs, and means for adjusting the rocking arm against the load imposed by the awning roller.

10 7. A center support for roller awnings comprising a supporting arm adapted to project from a building front and underlie an awning roller, a belt roller journaled in said arm, a second arm pivoted intermediate its length to said supporting arm, a pair of belt rollers journaled in said second arm, an endless belt encircling all of said belt rollers and adapted to support the awning roller on one of its runs, and means to pivotally adjust the second arm to cause one of its rollers to approach and the other to recede from the awning roller.

25 8. A center support for roller awnings comprising a supporting arm adapted to project outwardly from a building front and having extensions respectively adapted to overlie and underlie an awning roller, a belt roller journaled in said arm, a guard roller journaled at the outer end of the upper extension of said arm, a second arm pivoted intermediate its length to the lower extension of said arm, a pair of belt rollers journaled adjacent the opposite ends of the second arm, the outermost roller being normally spaced from the guard roller a distance less than the diameter of the awning roller, an endless belt encircling all of said belt rollers, and means for swinging the second arm on its pivot to increase the distance of its outer belt roller from the guard roller.

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