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F. A. ANTON

2,019,473

SLANT ADJUSTMENT FOR LATERAL ARM AWNINGS

Filed April 12, 1934

2 Sheets-Sheet 1

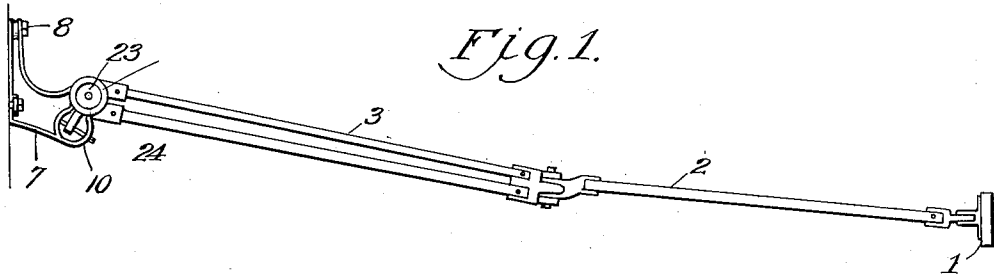


Fig. 1.

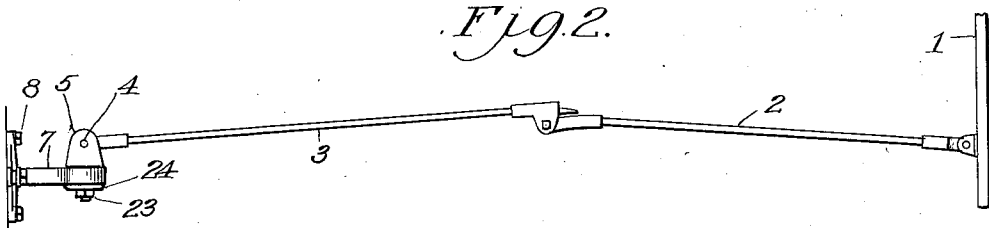


Fig. 2.

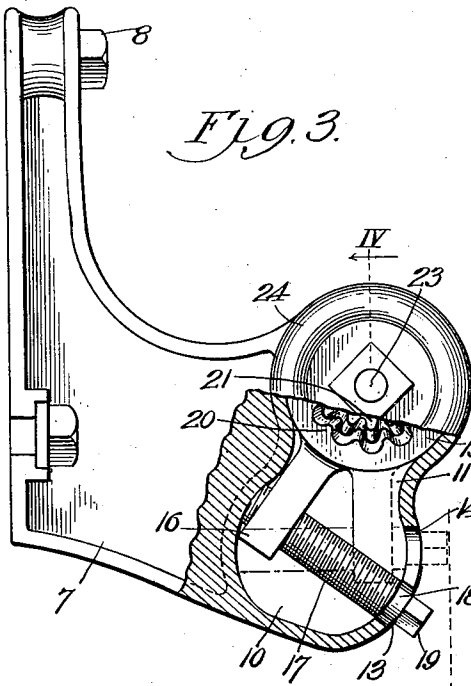


Fig. 3.

Fig. 4.

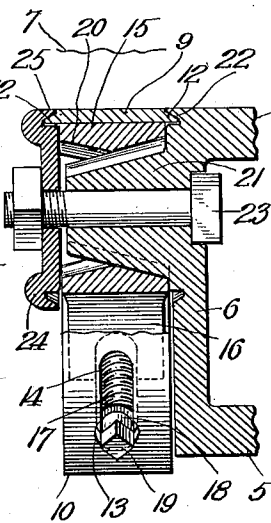


Fig. 5.

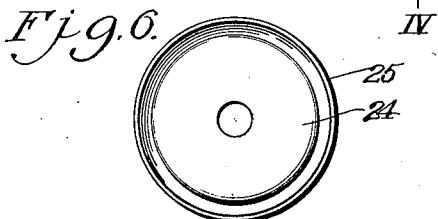
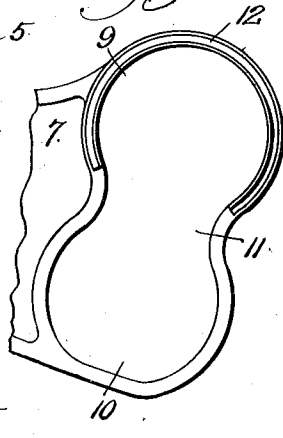


Fig. 6.

Inventor
Frederick A. Anton.

By *Thorpe Thorpe*
Attorneys

Nov. 5, 1935.

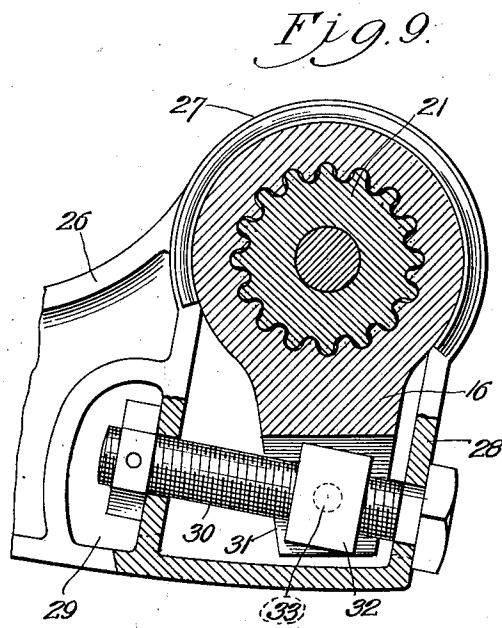
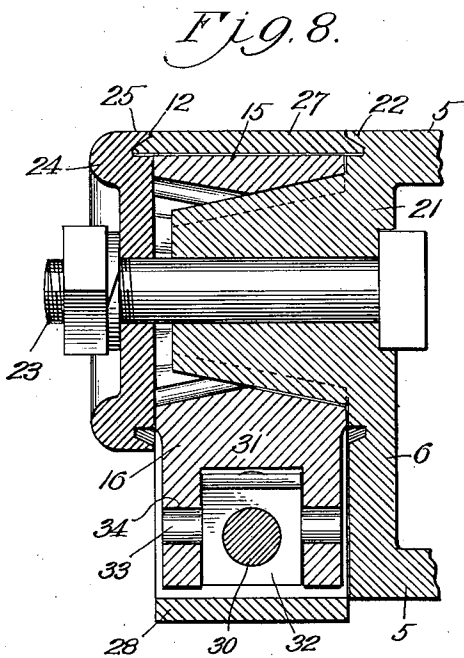
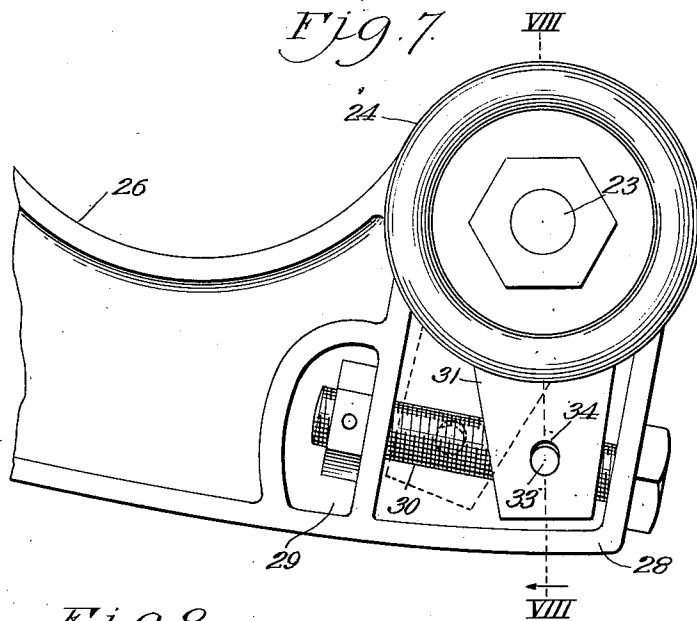
F. A. ANTON

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SLANT ADJUSTMENT FOR LATERAL ARM AWNINGS

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2 Sheets-Sheet 2



Inventor
Frederick A. Anton.

Thorpe Thorpe
Attorneys

UNITED STATES PATENT OFFICE

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SLANT ADJUSTMENT FOR LATERAL ARM AWNINGS

Frederick A. Anton, Topeka, Kans.

Application April 12, 1934, Serial No. 720,245

6 Claims. (Cl. 156—44)

This invention relates to lateral arm awnings and has for its general object to produce an adjustable hanger and bracket support for lateral arms for the control and adjustment of the pitch or slant of the arm.

One of the objects of the invention is to produce a construction of the type mentioned which is provided with interlocking members whereby the awning bracket may be preliminarily locked to the hanger in its approximate position, and a screw operated mechanism for bringing the hanger to its final position.

Another object of the invention is to provide a construction in which the screw adjusted member and the bracket may be provided with cooperating wedge faces so that they will all be reliably and securely held against vibration when they have been finally adjusted.

A further object of the invention is to provide means whereby there may be an interlocking wedge relationship between the abutting portions of the hanger and the bracket so that the clamping of the latter will reinforce, strengthen and stiffen the former.

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 claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawings, in which:—

Figures 1 and 2 are respectively a side elevation and a top plan view of an awning arm having an adjustment embodying the invention.

Figure 3 is an enlarged side elevation of a hanger and bracket, partially broken away to more clearly disclose parts otherwise hidden.

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

Figure 5 is a side elevation of the outer end of the hanger.

Figure 6 is an elevation of the inner face of a clamping plate forming a part of the invention.

Figure 7 is a side elevation of the outer end of a slightly modified hanger and bracket adjustment assembly.

Figure 8 is a section on the line VIII—VIII of Figure 7.

Figure 9 is a side elevation of the construction shown in Figures 7 and 8, with the clamp plate removed from position.

In the said drawings, where like reference characters identify corresponding parts in all of the figures, 1 represents a front pole of any suitable type, and 2 and 3 respectively indicate the outer

and inner arms pivoted together for swinging movement as common in the art. The inner end of the inner arm is pivotally mounted on a bolt 4 carried by a pair of ears 5 formed integrally with an awning bracket 6 which is mounted for rotative movement on a horizontal axis to adjust the pitch of the awning arm as will hereinafter appear.

On Sheet 1 of the drawings, a hanger 7 is secured to the building front by bolts 8, the hanger 10 being formed at its outer end with a pair of transverse heads or chambers 9 and 10, connected together by a constricted mouth portion 11. The side edges of the head 9 may be bevelled as at 12 for the greater portion of their length. The front wall of the chamber 10 is provided with a key hole shaped slot, in the form shown, the wider portion of the slot being at 13 and the narrow neck portion extending upwardly therefrom as at 14 (Figures 3 and 4).

Rotatably adjustable within the chamber 9 is a clamping element 15, said element being provided with a tail piece or arm 16 projecting through the mouth 11 into the head or chamber 10, and being formed with any suitable threaded means to receive an adjusting bolt 17, provided with a reduced neck 18 and a head 19. The bolt 17 is of such diameter that it may be passed through the opening 13 and threaded into the arm 16. When the end of the bolt abuts the back wall of the chamber 10, the reduced neck 18 (the shoulder between the neck and the threads being rounded to substantially conform to the arc of the head) commences to enter into the narrow slot 14, and it will be evident that when this occurs the element 15 is rotatably adjusted within the chamber or head 9, it being impossible for the bolt 17 to move longitudinally as such action is prevented through contact at one end and by its shoulder, respectively, with opposite sides of the chamber 10. The adjustment of the element 15 is limited by contact of its tail piece 16 with opposite sides of the head 10, but even with a small chamber the range of adjustment at the outer end of the awning arm is greatly magnified by a small adjustment of element 15.

In the construction as shown, although not essential, the inner face of the clamping element 15 is formed with two sets of reversely inclined teeth 20 so that it may receive a toothed cone 21 formed integrally with the awning bracket 6, although it is obvious that the equivalent result may be secured by making the cone cylindrical if the wedge relationship is not desired. In practice, the bolt 17 and the clamping element 15 are assembled,

and the bolt is threaded about half way through the tail 16 so that the element can be rotatively adjusted in either direction, depending upon whether the arm is to be raised or lowered. The operator then engages the teeth of the cone 21 with the teeth 20 in the approximate position required for the desired pitch. The final adjustment is then accomplished by rotation of the bolt 17.

10 In some cases it may prove desirable to interlock the hanger and the bracket for reinforcement of the head of the former, and this may be accomplished by providing the face of the hanger with an inclined wedge portion 22 to enmesh with the portion 12 of the hanger, and the entire assembly is clamped against opposite sides of the hanger by means of a bolt 23 engaging a clamp plate 24 having a wedge portion 25 for fitting the portion 12 on the opposite side of the hanger. Of course, the rotative adjustment of the hanger will be performed, preferably, before the clamp bolt 23 is screwed home.

On Sheet 2 of the drawings, a modified structure is shown, in which: the hanger 26 is formed at its outer end with a head or chamber 27 which has communication with a second head or chamber 28. Rearwardly of the head 28 is a small transverse opening 29 in the web of the hanger, and journaled or swivelled, but having no rocking or longitudinal movement, in the front and rear walls of the head 28 is a threaded screw element or bolt 30. The lower end of the arm 16, in this construction may be bifurcated as at 31 to receive a nut or collar 32 threaded on the swivelled bolt 30 and provided with a pair of projecting studs or arms 33 received within elongated sockets or openings 34 in the adjacent faces of the fork 31. It will be evident that as bolt 30 is rotated, it will thrust in one direction or the other against the hanger and at the same time, but in the opposite direction will apply force to the collar 32 to effect its travel back and forth to rotatively adjust the clamp element 15. The resultant oscillation of the tail 16 is accommodated by the elongated sockets 34. In other respects, the mode of operation and construction of this modified structure may be similar to that hereinbefore described.

From the above description, it will be apparent that while I have described the preferred embodiments of the invention, it is to be understood that I reserve the right to make all changes within the spirit of the invention and without the ambit of the prior art.

I claim:—

55 1. In an awning, a hanger having at one end means for attaching it to a wall and at its other end carrying a bracket for rotative adjustment about a pivot having its axis passing through the hanger adjacent its outer end, means for angu-

larly adjusting the bracket with respect to the hanger by turning it about the axis of its pivot, said means comprising a clamping element having teeth enmeshed with the bracket, and a bolt thrusting in reverse directions against the hanger and the clamping element to rotate the latter.

2. In an awning, a hanger having a head formed with a transverse axis, a toothed bracket at one side of the head, toothed means rotatably adjustable around the axis of the hanger head and forming a support for and being enmeshed with said bracket, and a threaded bolt for imparting rotative movement to said toothed means.

3. In an awning, a hanger having at one end means for attaching it to a wall and at its other end carrying a bracket for rotatable adjustment about a pivot having its axis passing through the hanger adjacent its outer end and said bracket having toothed means for angularly adjusting the bracket with respect to the hanger by turning it about the axis of the pivot, said toothed means comprising a clamping element having inwardly projecting teeth enmeshed with the teeth of the bracket, and a bolt thrusting in reverse directions against the hanger and the clamping element to rotate the latter in the hanger.

4. In an awning, a hanger having a head formed with a transverse axis, a clamping member rotatively adjustable around the axis of the hanger head and being provided with an internal chamber having inclined teeth, a bracket formed with a projection having inclined teeth for wedging engagement with the teeth of the clamping member, means to clamp said bracket and clamping member, and a threaded bolt for imparting rotative movement to the clamping member.

5. In an awning, a hanger having a transverse head, a toothed bracket at one side of the head, toothed means rotatively adjustable around the axis of the hanger head and forming a support for and having its teeth enmeshed with the toothed bracket, a swivelled element mounted in the hanger, a collar mounted on the swivelled element and movable back and forth by turning movement of the latter, and means whereby the collar in its movement on the swivelled element shall effect rotatable adjustment of said toothed means.

6. In an awning, a hanger having a head formed with a transverse axis, a bracket at one side of the head for rotatable adjustment around the axis of the head, a rotatable element abutting at its opposite ends against parts of the hanger and having rocking movement with respect thereto, and means whereby rotation of said element shall effect rotatable adjustment of the bracket around the axis of the hanger head.

FREDERICK A. ANTON.