Sept. 15, 1931. L. B. GOLDBERG ET AL 1,823,649

FOLDING AWNING ARM

Filed Jan. 27, 1931

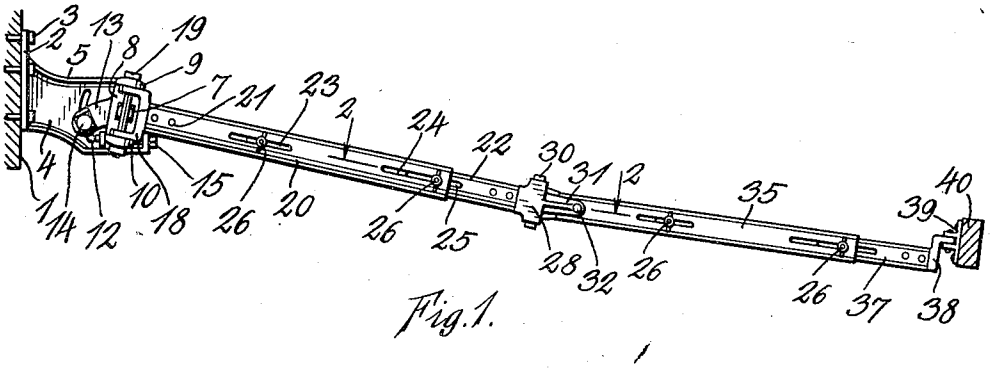


Fig. 1.

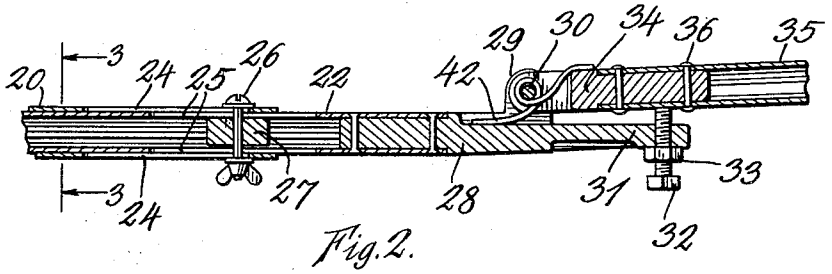


Fig. 2.

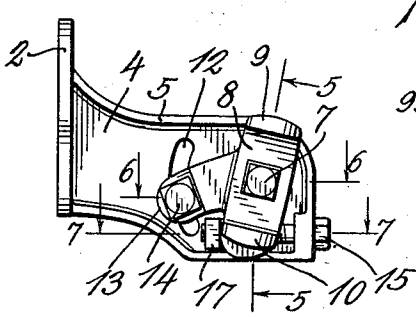


Fig. 4.

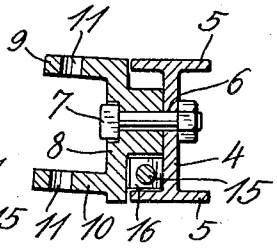


Fig. 5.

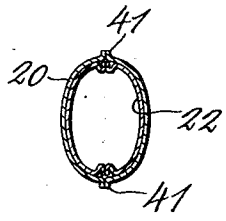


Fig. 3.

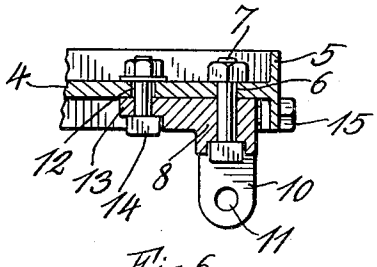


Fig. 6.

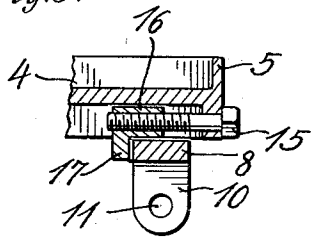


Fig. 7.

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UNITED STATES PATENT OFFICE

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FOLDING AWNING ARM

Application filed January 27, 1931. Serial No. 511,534.

This invention relates to improvements in folding awning arms of the type described and claimed in U. S. Patent No. 1,742,234, granted January 7, 1930, to F. R. Clifton.

It is the object of this invention to produce an improved bracket or supporting means for arms of this type that shall be so constructed that the inclination of the arm with respect to the supporting surface can be readily adjusted and held in adjusted position.

Another object of this invention is to produce an improved construction of the extensible arm sections so as to increase the strength and rigidity of the arm without materially increasing its weight.

The above and other objects that may become apparent as this description proceeds are attained by means of a construction and an arrangement of parts that will now be described in detail, and for this purpose reference will be had to the accompanying drawings in which the preferred embodiment of the invention has been illustrated, and in which:

Fig. 1 is a side elevation of an awning supporting arm showing the same in extended position and secured to a vertical supporting surface;

Fig. 2 is a section taken on line 2—2, Fig. 1;

Fig. 3 is a section taken on line 3—3, Fig. 2;

Fig. 4 is a side elevation of the supporting bracket and associated parts with the arm removed;

Fig. 5 is a section taken on line 5—5, Fig. 4;

Fig. 6 is a section taken on line 6—6, Fig. 4; and

Fig. 7 is a section taken on line 7—7, Fig. 4.

In the drawings reference numeral 1 indicates a vertical supporting surface as, for example, the outside of a building. Secured to the supporting surface is a bracket comprising a base 2 that is perforated for the reception of securing bolts 3. Extending outwardly from the base is a wall or web 4 whose outer edge is provided with a flange 5. The flange has been shown as extending to both sides of the wall as indicated in Fig. 6, but may be located entirely on one side if desired. The flange extends entirely around the wall 4 and has its ends in the base 2. The arrangement of wall 4 and flange 5 gives to this part the maximum strength for the amount of material employed. The wall 4 is provided with an opening 6 for the reception of a bolt 7 that serves as a pivot for the U-shaped supporting bracket 8. This bracket is provided with two outwardly extending lugs or ears 9 and 10, that are perforated as indicated by reference numeral 11. The wall 4 is provided with an arcuate slot 12 that is concentric with the opening 6 and the support 8 has a projection 13 that extends over the arcuate slot and is perforated for the reception of a clamping bolt 14. An adjusting device comprising a bolt 15 is associated with the bracket and the support and the bolt passes through an opening in flange 5 in the manner shown in Fig. 7. The inner end of the bolt is provided with a nut 16 that has an outwardly extending projection 17 that engages the U-shaped support to the rear of the lower end thereof. Secured to the U-shaped support is a hinge member 18 that is provided with two spaced arms that are located between the arms 9 and 10 and which are perforated for the reception of the bolt 19. A tubular member 20 is secured to the hinge member 18 by means of rivets 21 and telescopically connected with member 20 is another tubular member 22. Member 20 is provided with two longitudinal slots 23 and 24, and member 22 is provided with corresponding slots 25 or it may be provided with a number of spaced holes. Bolts 26 extend through the slots in members 20 and 22 and serve to clamp the two members against relative longitudinal movement. For the purpose of preventing the tubular member from collapsing, a solid spacing block 27 is provided in the interior of member 22 and this serves to resist the pressure exerted by the clamping bolt. By loosening the bolts 26 the two parts 20 and 22 can be moved

relative to each other so as to increase or decrease their combined lengths.

Secured to the outer end of member 22 is a hinge member 28 which is provided on one side with two spaced lugs or ears 29 that are perforated for the reception of a pivot pin 30. Member 28 has an extension 31 that projects beyond the lugs or ears as shown in Fig. 2, and this is provided with a threaded opening for the reception of a bolt 32 that can be adjusted and held in adjustment by means of a locking nut 33. Secured to the hinge member 28 by the pivot pin 30 is another hinge member 34 to which the tubular member 35 is secured by means of rivets 36. Another tubular member 37 is telescopically connected with member 35 and these two members are held in adjusted position by means of bolts 26 in the manner described in connection with members 20 and 22. Secured to the outer end of member 37 is a Z-shaped bracket 38 to the upper and outer end of which is secured a supporting member 39 to which a wooden bar 40 is fastened.

Since the type of awning and awning support to which this invention relates is old and well known no attempt will be made herein to describe the actual operation of folding these supporting arms nor to show the manner in which the canvas is secured in place. The invention relates more particularly to the manner of supporting the two-part arm so that the inclination of the arm with respect to the supporting surface can be readily adjusted to suit the particular conditions prevailing at the point where the installation is made.

In the operation of installing and adjusting awning arms of this type, care must be taken to adjust the several arms to the same inclination in order to obtain satisfactory operation of the awning during the folding and unfolding thereof. For the purpose of adjusting the inclination, the arms are supported from a U-shaped support 8 that in turn is pivotally attached to the wall 4 of the bracket by means of a pivot 7. The wall 4 is provided with an arcuate slot 12 for the reception of a clamping bolt 14 that extends through this slot and through a part of the U-shaped support. When bolts 7 and 14 are tightened, the U-shaped support will be held against rotation. In order to facilitate the adjustment a bolt 15 has been provided. This bolt extends through an opening in flange 5. This bolt is provided with a nut 16 that has a lug 17 that engages the rear surface of the supporting member 8 in the manner shown in the drawings. When bolts 14 and 7 are loosened, the torque exerted by the arm will be resisted by bolt 15 and when this bolt is turned in either direction the U-shaped supporting bracket is rotated about its pivot to the extent required, and in this way the inclination of the arm can be adjusted to the exact position desired without making it necessary to have some one holding the arm as must be done if the supporting device is not provided with some screw adjustment of this type. Attention is also called to the fact that bolt 15 is under tension which greatly simplifies the construction. After the arm has been adjusted to the desired inclination, bolts 14 and 7 are tightened so as to hold the parts in adjusted position.

The tubular members can be made in any suitable manner but in the embodiment illustrated, the tubular members are each formed from two similar sections, each provided with flanges 41 that are welded together and the inner tubular members have the welded portions pressed inwardly in the manner shown in Fig. 3.

In order to assist in extending the arms after they have been folded and when the canvas is unrolled, a spring 42 is provided and this spring is coiled about the pivot pin 30 and has its ends resting on the adjacent arm sections.

Having described the invention what is claimed as new is:

1. A device for supporting a two-part hinged foldable awning arm comprising, in combination, a bracket having a base provided with a flat surface adapted to be secured against a vertical supporting surface, the bracket having a flange that has both ends connected with the base and which, in connection with the base encloses a space, a web closing the space between the base and the flange, a U-shaped support pivotally secured to the web, said support having a lug extending radially from the pivot, the web having an arcuate opening concentric with the pivot and a clamping bolt extending through the arcuate opening and through the lug and adapted to clamp the U-shaped support against rotation about its pivot.

2. A device for supporting a two-part hinged foldable awning arm comprising, in combination, a bracket having a base provided with a flat surface adapted to be secured against a vertical supporting surface, the bracket having a flange that has both ends connected with the base and which, in connection with the base encloses a space, a web closing the space between the base and the flange, a U-shaped support pivotally secured to the web, said support having a lug extending radially from the pivot, the web having an arcuate opening concentric with the pivot, a clamping bolt extending through the arcuate opening and through the lug and adapted to clamp the U-shaped support against rotation about its pivot and a bolt extending through the flange and engaging

the support for use in turning the support about its pivot.

3. A device for supporting a two-part foldable awning arm comprising a bracket having a base provided with an outstanding wall, a pivot extending through the wall, a U-shaped support rotatably adjustable upon the pivot, the wall having an arcuate slot concentric with the pivot, the U-shaped support having a portion that extends across the slot, a clamping bolt extending through the slot and through the U-shaped member, the outer edge of the wall having a flange, and means extending through the flange and connected with the U-shaped support for moving the latter about its pivot.

4. A device for supporting a two-part foldable awning arm comprising a bracket having a base provided with an outstanding wall, a pivot extending through the wall, a U-shaped support rotatably adjustable upon the pivot, the wall having an arcuate slot concentric with the pivot, the U-shaped support having a portion that extends across the slot, a clamping bolt extending through the slot and through the U-shaped member, the outer edge of the wall having a flange, a bolt extending through the flange and a nut associated with the bolt and connected with the support whereby the latter will be turned about its pivot when the bolt is rotated.

5. A device for supporting a two-part foldable awning arm comprising a bracket having a base adapted to be secured to a support and provided with an outstanding wall, the outer edge of the wall having a flange, a U-shaped support pivoted to the wall near the outer end thereof, the wall having an arcuate slot concentric with the pivot, a portion of the U-shaped support extending over the slot, a clamping bolt connected to the support and extending through the slot for clamping the two parts together and for holding them against relative movement and means for turning the support about its pivot, said means comprising a threaded member extending through an opening in the flange and engaging the support.

6. An extensible support for an awning, comprising a pivotally mounted arm hinged intermediate its ends for folding the parts on opposite sides of the hinge joint being each formed from two tubular sections of substantially elliptical cross section telescopically connected and means for holding the sections in adjusted position.

7. An extensible awning support comprising a pivotally mounted arm hinged intermediate its ends for folding, the parts on opposite sides of the hinge joint being each formed from two tubular sections of substantially elliptical cross section telescopically connected, and means for holding the sections in adjusted position, the outer end of the outer section having a Z-shaped bracket that terminates a short distance above the upper surface thereof.

In testimony whereof we affix our signatures.

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