Dec. 26, 1933. E. F. LEWIS 1,940,958

HEAD ROD CLAMP

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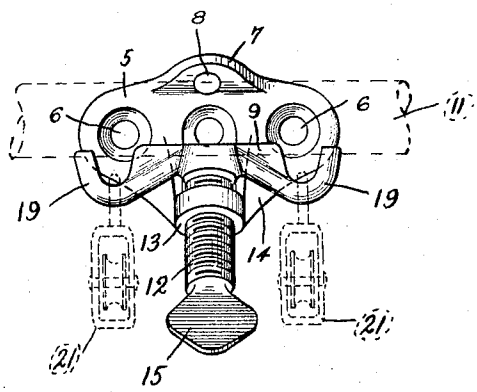


Fig. 1

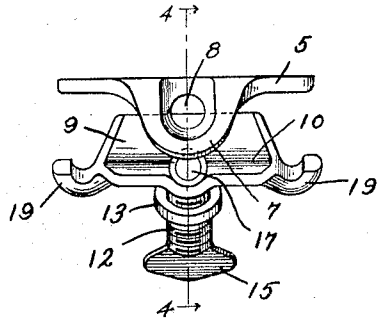


Fig. 2

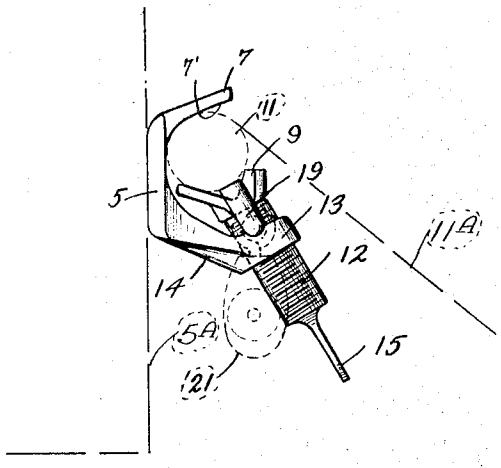


Fig. 3

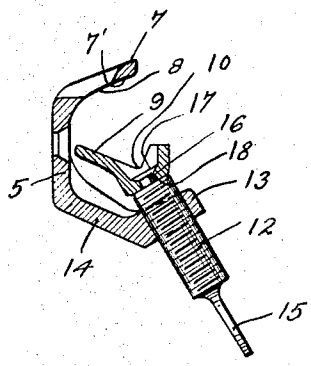


Fig. 4

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HEAD ROD CLAMP

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5 Claims. (Cl. 156—15)

The present invention relates to a head rod clamp intended for use in mounting awnings and the like, and, more particularly, to a clamp of this character having certain improved features for supporting a head rod and pulleys.

In awning fixtures, such as that to be herein described, it is desirable to provide an article which is readily fastened and unfastened so that the awnings can be quickly put up and taken down according to the season. It is also desirable to provide a fixture which is more or less integral in nature or in which the parts are otherwise inseparable so that each fixture will be complete and ready to be adjusted when it is needed. Since these devices are often stored away during the winter, it is easily possible for detachable parts to become misplaced or lost unless provision is made against such contingency. The present invention, therefore, contemplates an awning fixture in which the foregoing objections are entirely avoided.

It is, accordingly, an object of the invention to provide a head rod clamp which holds a head rod securely in place and is adjustable for various sizes of such rods. Another object of the invention is to provide a head rod clamp of which the various parts are inseparably connected. A further object of the invention is to provide a head rod clamp which is adjustable for various sizes of head rods and which also provides integral means for attaching pulleys thereto. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims. The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:

Fig. 1 is a front elevation of the improved clamp; Fig. 2 is a top plan view of the clamp in the position which it would occupy when attached to a vertical surface; Fig. 3 is an end view corresponding to Figs. 1 and 2; and Fig. 4 is a section taken along the line 4—4 of Fig. 2.

Referring to the drawing, a back plate 5 has a plane rear surface and countersunk holes 6 through which screws are passed to attach the clamp to the surface 5A of a building above a window which is to be equipped with an awning. The back plate 5 carries an outwardly turned flange or lip 7 which is slightly curved on its inner surface 7' and pierced with an aperture 8 for a purpose to be described hereinafter. Opposed to the lip 7 is a bifurcated part or jaw 9 providing a groove 10 and being movably mounted so as to cooperate with the curved lip to secure a head rod 11 between the groove 10 and the curved inner surface 7'. The groove provides a perfect seat for a head rod and the curved surface eliminates any possible chance of the rod pulling out when carrying the weight of the awning. The movable part is carried by a screw 12 which is threaded in a collar 13 integrally carried by the back plate 5 to which it is connected by the web 14.

The screw 12 turns freely in the collar 13 by means of the handle 15, which is scored to insure a firm grip by the fingers, and moves the jaw 9 upwardly toward the flange 7, thus tightly gripping the head rod 11 between the two. The reduced end of this screw passes through a centrally disposed hole 16 in the bottom of the groove 10 where it is upset to provide an enlarged portion 17 so that the screw and jaw are inseparably attached to each other and, also, the screw cannot be entirely removed from the collar 13, thus insuring that all parts of the clamp will remain permanently together. In order to upset the end of the screw to provide the enlarged portion 17, the aperture 8 is disposed in the flange 7 in line with the screw so that a tool can be inserted through this aperture and the upsetting operation easily performed. While the part 9 is securely held between the shoulder 18 of the screw body and the upset portion 17, it will be understood that the engagement is not rigid but that sufficient play is left so that the part 9 may move so as to adjust itself to the surface of the head rod which is to be engaged thereby.

As a consequence of the interaction of these parts, the head rod is securely held in place between the groove 10 in the part 9, and the curved surface of the flange or lip 7, the groove embracing the lower part of the rod and the lip engaging the upper part so that the rod cannot pull out despite its rounded surface and the weight of the awning supported by it. Also, it will be noted that the action of the clamping member 9 is upward in contradistinction to the action of practically all head rod clamps as previously made in which the clamping action is downward. This aids the clamp in holding the head rod since the pull of the awning has a large downward component against which the upward clamping action of the present device is exerted to better hold the head rod in place.

As will be seen from Fig. 3, the awning, shown

in dotted lines and designated 11A is outside of and above the clamping elements 9, 12 and 15. Thus the rod can be conveniently reached by the awning erecter, from inside a window, whether the awning be extended, as in Fig. 3 or rolled up.

In addition to its function of securely engaging and clamping a head rod against the flange 7, the part or jaw 9 also carries hangers or hooks 19 which are integral with such jaw and are intended to carry pulleys 21 for awning ropes. These hangers are open and the pulleys may be readily placed thereon or removed according to whether an awning is being put up or taken down. Also, the hangers being integral with the movable jaw 9, move therewith and the pulleys are always brought close up to the head rod which is desirable, and prevents accidental unhooking. The hangers also serve to aid the groove 10 in gripping the head rod since the upper ends thereof extend slightly above the apex of the groove so that a head rod of a diameter frequently used rests on these ends, extending the length of engagement of the rod and clamp.

It will thus be seen that there has been provided a head rod clamp for use with awnings and the like, in which a head rod of varying diameter is engaged between an immovable part and a movable part, the movable part being accessible from beneath the awning and adjustable to clamp the head rod in the engaged position and provide a secure mounting for an awning. At the same time, the clamp carries hangers or hooks for attaching pulleys in such fashion that these can be readily attached or removed. The clamping means for the head rod is readily adjusted so that the head rod can be placed in position or removed with facility from inside the building and, in addition, all of the parts of the clamp are inseparably connected insuring that the clamp will remain as a complete operative unit whenever needed.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A head rod clamp adapted to be attached to a supporting surface comprising an immovable part and a movable part for engaging an awning head rod and upwardly directed screw means inseparably attached to said movable part for bringing the same upwardly into clamping engagement with said head rod.

2. A head rod clamp adapted to be attached to a supporting surface comprising an immovable lip and a movable jaw, said jaw having a longitudinally extending groove therein for engaging a head rod and said lip being curved to secure said head rod in place, and upwardly directed screw means inseparably attached to said movable part for bringing the same upwardly into clamping engagement with said head rod.

3. A head rod clamp comprising an immovable part adapted to be attached to a vertical supporting surface, a lip on said immovable part concave on its rod-receiving face, a movable jaw having a longitudinally extending groove therein for engaging a head rod against said lip, and screw means rotatably mounted in said immovable part and attached to said movable part, said screw means extending in an upward and inward direction toward said curved lip when the clamp is in place.

4. A head rod clamp comprising an immovable part adapted to be attached to a vertical supporting surface, a lip on said immovable part curved forwardly concave when the clamp is positioned for use, a movable jaw having a longitudinal groove therein extending beyond said lip on either side for engaging a head rod, and screw means rotatably mounted in said immovable part and carrying said movable part, said screw means being positioned to exert pressure inwardly and upwardly toward said curved lip to hold a head rod in the concavity of said lip.

5. A head rod clamp comprising an immovable part adapted to be attached to a vertical supporting surface, a lip extending forwardly from the upper portion of said immovable part, a bracket extending forwardly from the forward portion of said immovable part, a rod-engaging member adapted to engage a head rod from beneath and to clamp the same between itself and said upper extension, and a supporting and tightening element for said rod-engaging member operatively engaging with said bracket and accessible from below an awning cloth fastened to said bracket.

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