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WALL SUPPORT FOR AWNINGS

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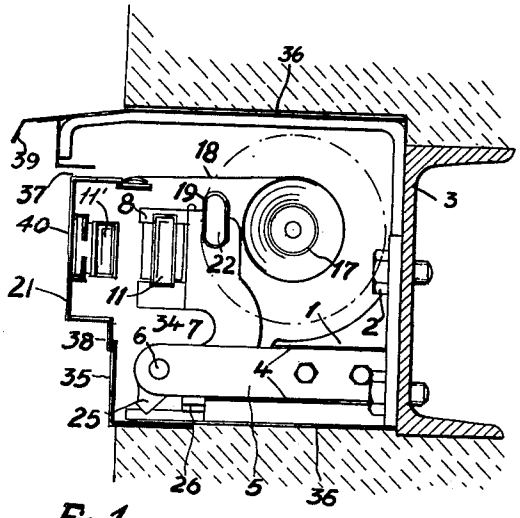


Fig. 1

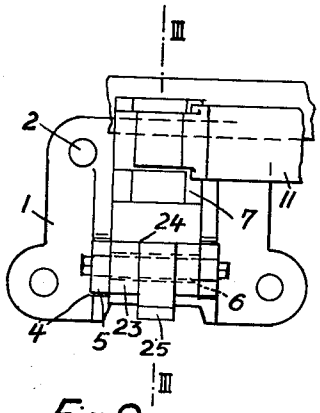


Fig. 2

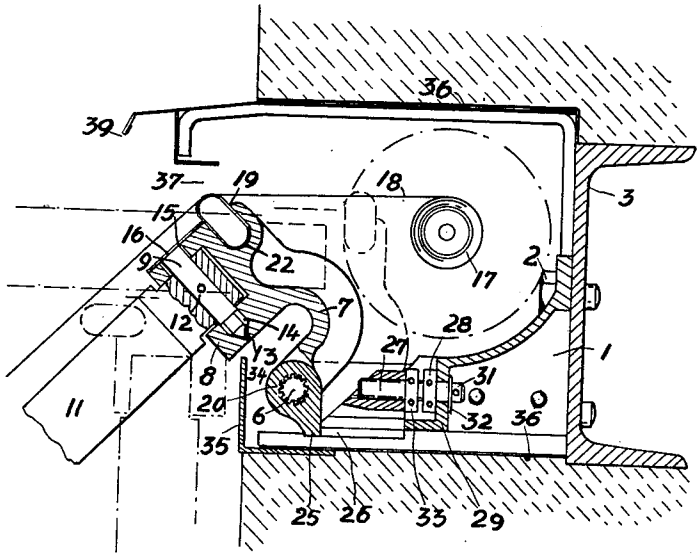


Fig. 3

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WALL SUPPORT FOR AWNINGS

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11 Claims. (Cl. 160—22)

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The invention refers to wall supports for awnings, with joint axles, on the side facing the wall, for the upper arms oscillating in vertical planes perpendicularly disposed in relation to the wall of the house, said upper arms being turned from their approximately horizontal position of rest parallel to the wall of the house into a position of use approximately rectangular with relation to the wall of the house when the awning is being expanded, the articulations disposed between the lowering rod and the wall support being stretched in doing so.

With known mechanisms of this type, the link axle invariably remaining inside the protective box is adjusted at a suitable angle of inclination with a view to obtaining the inclination desired of the stretched awning and fixed in that position in the wall support.

In consequence of this, in the position of non-use of the awning the arms as well as the lowering rod will assume a correspondingly inclined position, in such a way, that the arms with the cloth will protrude from the protective box at varying heights depending upon the position of inclination adjusted.

By reason of this, the protective box must be of rather high construction, and its passage opening must be made very high. This again results in the necessity of giving a considerable height to the lowering rod serving to close the opening of the protective box. In consequence of this, the closing effected will be rather deficient for the reason that the lowering rod will adapt itself in varying angular relation to the exterior of the protective box depending upon the position of inclination adjusted. For similar reasons, the angular range within which the inclination of the awning may be adjusted, is also limited.

To avoid these deficiencies, the support of the joint axle for the upper arm, in accordance with the present invention, is arranged with relation to the rigid portion of the wall support bracket in a movable manner, in such a way, that the joint axle may be moved out of the protective box with a view to freeing the arms for the expanding motion for stretching the awning in any desired position of inclination. In the position of non-use of the awning the link axle is invariably held in its unchanged, by preference vertical, position while it will change to its inclined operative position when the awning is being stretched, said position being determined by adjustable stops.

By reason of this arrangement, the link arms will eventually move out of the protective box

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in conjunction with the point axle invariably in the same angular position. The lowering rod will move out of the protective box always in the same, preferentially vertical position, in such a way, that the overall height of the protective box, of its passage opening and of the lowering rod may be reduced in size, a factor considered most desirable also from an architectural point of view. Independent of the inclined position of the awning established, the lowering rod will invariably adapt itself vertically to the exterior wall of the protective box when the awning is not in use. The overall height of the passage opening and of the lowering rod is considerably reduced, furthermore, by the fact that the forked member supporting the joint axle is provided with a deep recess below the joint axle on the side facing forward when the awning is in its position of rest, with which it may come out beyond a forward closing strip of the protective box when being swung forward into its operative position, in such a way, that with a minimum height of the projective box opening a pivoting range of the joint axle over a large angle, i. e. from 0° to 90°, will be obtained.

Additional features of the invention will become evident from the claims in conjunction with the following description.

In the drawings, an embodiment of the invention is presented by way of example,

Fig. 1 being a lateral view of the wall support;

Fig. 2 is a partial front view thereof, and

Fig. 3 is a section along line III—III of Fig. 2.

The wall support bracket 1 is bolted to a girder 3 on the wall of the house by means of screw bolts 2, and flat iron members 5 are screwed into laterally and horizontally disposed grooves 4, said iron members supporting at their free forward ends a horizontally disposed supporting bolt 6, with a forked member 7 mounted thereon for pivotal motion. This forked member 7 serves to support in an upper fork 8 joint or link axle 9 (Fig. 3) for the articulated upper arm 11 with which it is firmly connected by cross pin 12. This pin or joint axle is supported at its pointed lower end 13 in a tapered bore 14 in the lower portion of the fork member. At the upper end, a bearing 15 has been inserted for the reception of the upper radial stresses exerted by the link axle. A piece of sheet metal 16 serves as an upper cover to the needle bearing and the link axle.

From roller 17 disposed in special supporting arms above the wall support, cloth 18 is passed over a cloth guiding rod 19 having the purpose

to protect the cloth against being damaged by the protruding elements of the forked member. With its foremost edge, the cloth is fastened to the transversely arranged lowering rod 21 as shown in Fig. 1. The lowering rod is linked by means of eyes provided thereon to the outer arm 11' of the link in well-known fashion not shown in the drawings.

Cloth guiding rod 19 extends over the full width of the cloth; it is of rounded section and inserted in corresponding recesses 22 of all the forked members 7 of the awning, and fixed therein.

The lower end 23 (Fig. 2) of forked member 7 resting upon supporting bolt 6 is fork-shaped as well. The two fork-arms enclose an aperture 24 of the fork within which the bolt 6 supports a cam stop 25, likewise fixed to forked member 7, in such a way, that stop 25 is connected with forked member 7 to form a unit in that way joining in the oscillating movement of the latter.

Supporting bolt 6 is provided with a number of regularly disposed longitudinal ribs 20 engaging corresponding grooves in the holes of the cam stop and fork-arms making it possible to change the adjustment of stop 25 at certain angular intervals in relation to forked member 7. With eighteen longitudinal ribs 20 available, the relative adjustment of stop 25 and forked member 7 will amount to 20° each. Stop 25 is in cooperative relation with a counter-stop 26 and limits the position of inclination of link axle 9 in its swung-out operative position.

Alongside of the rough adjustment of the position of inclination between zero and 20 degrees by bolt 6, a fine adjustment has been provided which is obtained by the adjustability of counter-stop 26; for that purpose, counter-stop 26 is disposed in sliding fashion longitudinally adjustable on wall bracket. By an adjusting screw 27 it may be adjusted in any desired intermediate position within the range of rough adjustment of 20 degrees.

For the purpose of adjustment, adjusting screw 27 is equipped with a fixed collar 28. With its rearward end, the screw is pivotably supported in a vertical wall 29 of wall bracket 1 and secured by cotter pin and washer 31, 32. Adjusting screw 27 is screwed into the body of stop 26, in such a way, that by turning the collar 28 fixed on the screw, stop 26 is moved forward or backward. By a lock nut 33 mounted on the adjusting screw, the position adjusted is secured.

Forked member 7 is provided with a deep recess 34 on the side facing forward when the equipment is not in use which passes into operative position when forked member 7 is swung across a covering strip 35 of protective box 36.

As may be seen from Figs. 1 and 3, link axle 9 with its upper and lower arms and the cloth as well as part of the lowering rod 21 may be swung without being hampered into an inclined position between 0° and 90°, notwithstanding the reduced height of passage opening 37 in protective box 36.

The lowering rod 21 will always amply rest against the front of the protective box with its lower part 38, as may be seen from Fig. 1. In the upper part, the protective box extends beyond a forward extending part 40 of the lowering rod 21 by way of its protruding ledge 39, in such a way, that this rod with all other moving parts of the awning will be protected against influences of the weather. On the upper side of the lowering rod a slot open to the air has been provided for ventilation.

The detachable mounting of the flat iron members 5 supporting the horizontal bolt 6 has the advantage that by replacing the flat iron members by other shorter or longer ones, the position of the joint axle 6 in relation to the wall bracket may be altered.

What is claimed as new is:

1. In a wall support for awnings of the class described, an upper arm, a link pin forming a pivot for said upper arm near the wall, a protective box having a front opening and enclosing the awning in its position of inaction, a support for said link pin, means for moving said support with relation to the wall, the link pin being movable to said front opening by movement of said support in one direction for freeing the arm for extending motion, when the awning is being expanded, and means for adjusting the link pin to different inclination positions in a plane perpendicular to the wall in order to expand the awning in a corresponding position of inclination.

2. In a wall support for awnings according to claim 1, means adapted for causing the link pin to invariably occupy the same preferentially angular position when the awning is moved to its position of inaction, and adjustable stops connected with the wall adapted to stop said support when the awning is being spread into its inclined active position.

3. In a wall support for awnings according to claim 1, a rigid wall bracket, a horizontal axle therein, said support for the link pin being a forked member oscillating round said horizontal axle.

4. In a wall support for awnings according to claim 1, a rigid wall bracket, a horizontal axle therein, said support for the link pin being a forked member oscillatable round said horizontal axle, a fixed stop on said wall bracket disposed to limit the forked member in its backward position of rest, a stop on the forked member, a second stop on the wall bracket cooperating therewith, and means facilitating rough and fine adjustment of the latter two stops in relation to each other.

5. In a wall support for awnings according to claim 1, a rigid wall bracket, a horizontal bolt journalled therein, said support for the link pin being a forked member having two fork-arms secured to said bolt, a stop arm disposed between said fork-arms and fixed to said bolt, regularly longitudinal ribs on said bolt, and corresponding grooves in said fork-arms and said stop arm adapted to change the adjustment of said stop arm at different angular intervals in relation to said forked member for rough adjustment of the inclination of the awning.

6. In a wall support for awnings according to claim 1, a rigid wall bracket, a horizontal bolt journalled therein and bearing said support for said link pin, a stop arm mounted on said bolt at a selected angular position, a stop guided in the wall bracket cooperating with said stop arm, an adjusting screw disposed between said stop and said wall bracket for fine adjustment of the inclination of the awning.

7. In a wall support according to claim 1, a horizontal opening in said protective box, a deep recess in said support of the link pin arranged on the side facing forward when in position of inaction, said recess being below said link pin and movable to position straddling the lower edge of said opening of the protective box when swung forward into operative position.

8. In a wall support according to claim 1, a cloth guiding rod carried at the top of said support for said link pin in conjunction with the other supports of the awning keeping the cloth of the awning aloft from protruding parts of said supports.

9. In a wall support according to claim 1, a rigid wall bracket, a horizontal bolt bearing said support for said link pin, two lateral horizontal grooves in the wall bracket, two flat iron members detachably mounted in said horizontal grooves and pivotally bearing said bolt.

10. In a wall support for awnings according to claim 1, a pointed lower end on said link pin, a tapered bore in the support of the link pin supporting said pointed end, and a bearing between the upper end of the link pin and said support.

11. In a wall support for awnings of the class described, an upper arm, a link pin forming a pivot for said upper arm near the wall, a protective box having a front opening and enclosing the awning in its position of inaction, a support for said link pin, means for moving said

support with relation to the wall, the link pin being movable to said front opening by movement of said support in one direction for freeing the arm for extending motion, when the awning is being expanded, means for adjusting the link pin to different inclination positions in a plane perpendicular to the wall in order to expand the awning in a corresponding position of inclination, a lowering rod, a flat portion on said lowering rod serving as a stop in cooperative relation with the front wall of the protective box, said lowering rod having a part above said flat portion extending in forward direction and being connected with the cloth of the awning, and an upper ledge protruding from the protective box adapted to cover said forward extending part of the lowering rod when in retracted position and being separated from it by an air gap.

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