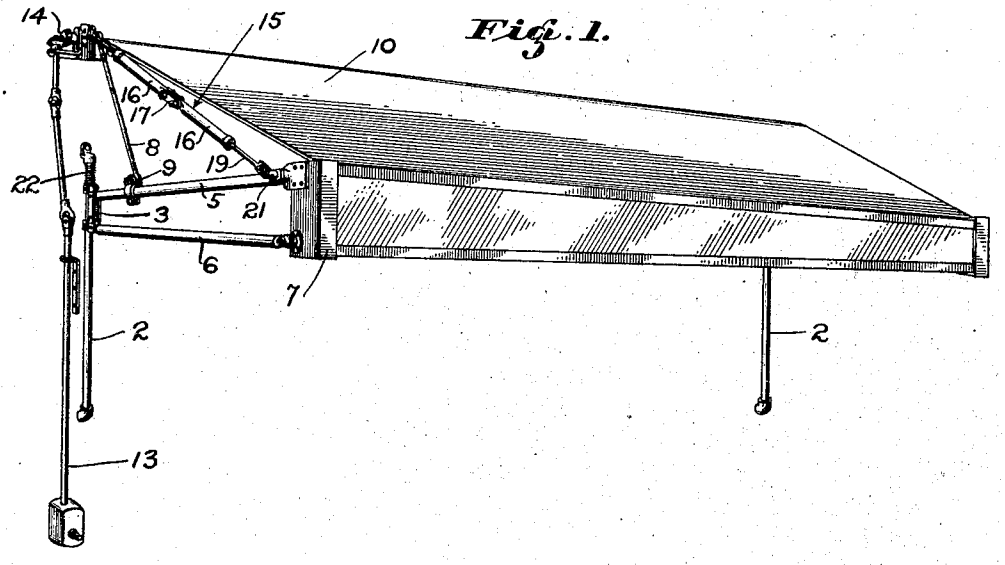
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T. C. GIRTON ET AL

AWNING FRAME

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Fig. 1.



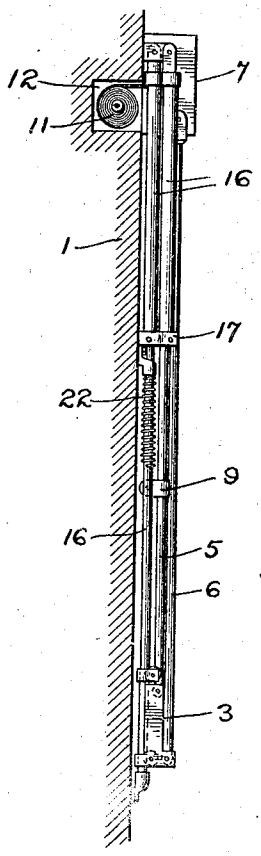


Fig. 2.

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AWNING FRAME

Filed March 25, 1926 2 Sheets-Sheet 2

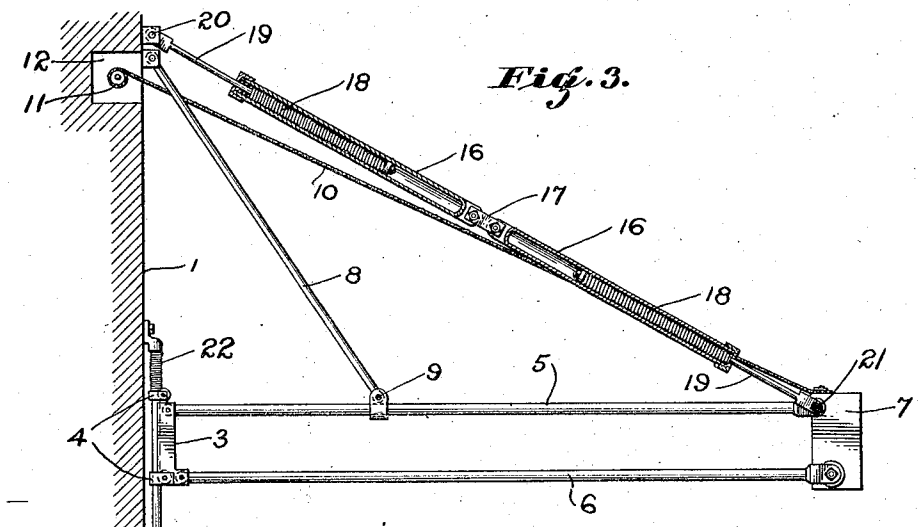


Fig. 3.

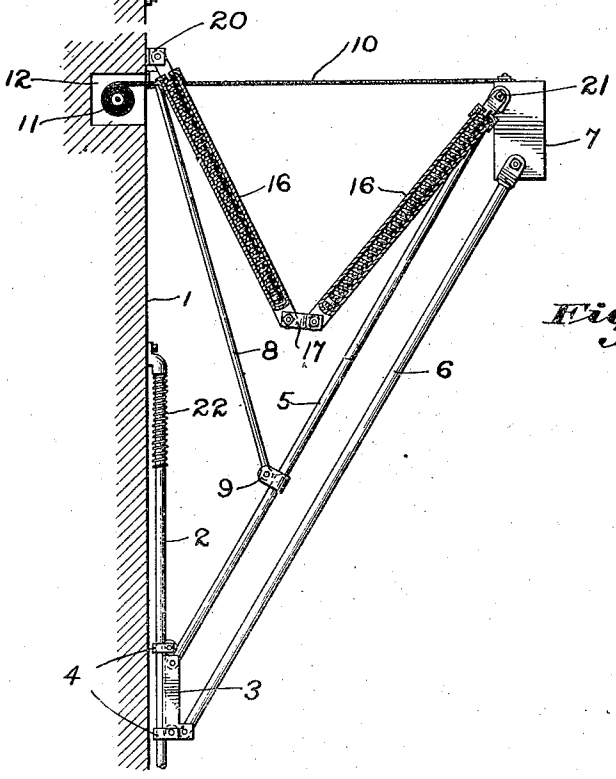


Fig. 4.

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UNITED STATES PATENT OFFICE.

THOMAS C. GIRTON AND FREDERICK J. P. KUHLMANN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNORS TO H. M. GOLDBERG CO., A PARTNERSHIP CONSISTING OF HARRY M. GOLDBERG, MILTON BIRNBAUM, AND H. S. BATCHELDER, ALL OF SAN FRANCISCO, CALIFORNIA.

AWNING FRAME.

Application filed March 25, 1926. Serial No. 97,191.

This invention relates to frames for awnings and particularly to a frame adapted to support a heavy illuminated sign at its outer edge. Such a frame is shown in a co-pending application Serial No. 5,937 to Harry M. Goldberg, filed Jan. 31, 1925. The outer edge of the frame shown in this prior application is supported entirely by the awning when the frame is in the down position. We have found that a heavy frame having a heavy sign on its free end cannot be substantially supported in this manner. Furthermore, placing the entire weight on the awning causes the awning to wear out rapidly and deteriorate. It is an object of our invention to provide an improved awning frame and supporting means combined therewith which will securely support the frame, and a sign thereon, without placing any strain on the awning.

We have also found that an awning frame having a heavy sign on its front edge is so heavy and cumbersome, that the same is raised with great difficulty and is liable to drop so quickly in lowering as to cause breakage. It is a further object of our invention to provide an improved awning frame and resilient means cooperating therewith for preventing shock when lowering the frame and for assisting in raising the frame.

Our invention provides means cooperating with the awning frame which performs the three-fold function of absorbing the shock when lowering the frame, supporting the frame in its lowered position, and aiding in the raising of the frame, other cooperating means being provided for aiding in the initial raising of the frame. It is a further object of our invention to provide such means for performing the functions stated.

In the accompanying drawings, we have illustrated one specific embodiment of our invention, but it will be understood that the invention can be otherwise embodied, and that the drawings are not to be construed as defining or limiting the scope of the invention, the claims appended to this specification being relied upon for that purpose.

Referring to the figures of the drawings:

Figure 1 is a perspective view of an awning frame embodying our invention.

Figure 2 is a side elevation of the frame in its raised or folded position.

Figure 3 is a like view showing the frame in its down position.

Figure 4 is a like view showing the frame in an intermediate position.

In the drawings, 1 indicates a supporting structure, such as the front of a store, on which our improved awning frame is mounted. A pair of vertically extending rods 2 are secured to the structure at each side of the frame. A member 3 is slidably mounted on each rod by means of straps 4. A pair of parallel side arms 5 and 6 are pivoted to each member 3 and pivotally connected at their outer ends to a sign member 7 extending along the front edge of the frame between the two pairs of arms 5 and 6. This member may be an illuminated sign of any type desired.

A supporting rod 8 is pivoted to the structure 1 over each pair of arms 5 and 6 and is pivotally connected to the arm 5 by means of a collar 9 clamped to the arm. One end of the awning 10 is connected to the top of the sign member 7 and the other end is wound onto a roller 11 mounted in a recess 12 formed in the structure 1. The roller is operated by shafting 13 and connecting gears 14 in the well known manner.

Were the frame constructed only of the parts thus far described, the entire weight thereof in the down position and including the sign 7, would be on the awning and on the rods 8. Furthermore, it would be extremely difficult to raise the frame, and shock or breakage to the frame or sign might occur when lowering the same. The mechanism now to be described and comprising our invention herein, overcomes all these objections and renders the frame adapted to the use of heavier signs than have heretofore been possible.

We provide a supporting connection 15 to each outer end of the frame. As illustrated, each such connection comprises a pair of cylinders 16 pivotally connected together at 17. A spiral compression spring 18 is mounted in each cylinder and a rod 19 extends through each cylinder and spring. The inner rod is pivotally connected to the structure 1 at 20, and the outer rod is pivotally connected to the outer end of arm 5, at 21. We also provide a compression spring 22 on each rod 2 above the member 3 thereon.

The use and operation of our invention is

believed to be obvious. In Fig. 2, the awning and frame are illustrated in the upper or folded position. The frame and awning are lowered by rotating the shaft 13 in the usual manner, the frame being supported in the lowering operation by the awning as it unwinds from the roller 11. When the frame approaches its down position, the cylinders 16 assume the straight position shown in Fig. 3. Further downward movement of the frame draws the rods 19 outwardly and compresses the springs 18. The springs thereby serve to counterbalance the greater portion of the weight of the frame and sign in the final lowering movement thereof, and act as a shock absorber to prevent breakage or injury to these parts. It will furthermore be noted that in the final lowering movement of the frame, the members 3 engage and compress the springs 22, whereby to also cushion the lowering of the frame at the other side of the supporting pivot 9.

As illustrated in Fig. 3, the frame in its down position is supported positively by the rods 8 pivotally connected to the arms 5, no weight being carried by the awning itself. The location of the pivots 9 and the weight of the sign 7, cause the frame to normally tend to turn clockwise about the pivots 9. The arrangement of the springs 18 and 22 is such as to resist this movement and support the frame in the horizontal position illustrated. It will furthermore be noted that in the full down position the springs 18 are completely compressed, whereby to provide a positive and rigid support for the parts. With such a support, the sign may be of any weight desired, the supporting connections 15 being made of a corresponding size and strength.

The initial raising of the frame by the roller and awning alone would take considerable power and place considerable strain on the awning and the roller rotating mechanism. The springs 18 and 22 are particularly adapted to assist in this operation in a manner relieving the awning and its cooperating parts of these objections. With the frame in the down position, the springs 18 and 22 are under compression as illustrated in Fig. 3. When initially rotating the roller to raise the frame, the springs 22 first react to kick the members 3 and their ends of the arms 5 and 6 downwardly, thus raising the sign upwardly. The springs 18 thereafter continue to react and aid in the initial raising of the frame. When the springs 18 have completely reacted, the frame is raised sufficiently that the awning can easily complete the raising operation. During this operation, the connections 15 fold up as illustrated in Fig. 4, and in the fully folded position, the sign 7 remains in the same relative position as when the awning is down.

Having thus described our invention, what we claim is:

1. An awning frame comprising the combination of two relatively spaced side arms having the inner ends pivotally connected to a supporting structure, whereby the arms can swing vertically thereabout, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, and means including resilient means forming a connection between the supporting structure and the first said means, the second named means acting as a shock absorber when lowering the frame, acting to support the frame in the lowered position and assisting in raising the frame.

2. An awning frame comprising the combination of two relatively spaced side arms having the inner ends pivotally connected to a supporting structure, whereby the arms can swing vertically thereabout, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, and a resilient supporting member above each arm, one end of each member being connected to the supporting structure and the other end to the free end of the arm, and the members acting as a shock absorber when lowering the frame, acting to support the frame in the lowered position and assisting in raising the frame.

3. An awning frame comprising the combination of two relatively spaced side arms having the inner ends pivotally connected to a supporting structure, whereby the arms can swing vertically thereabout, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, and a pair of resilient supporting members pivotally connected together above each arm and having one end connected to the supporting structure and the other end connected to the free end of the arm, the members acting as a shock absorber when lowering the frame, acting to support the frame in the lowered position and assisting in raising the frame.

4. An awning frame comprising the combination of two relatively spaced side arms having the inner ends pivotally connected to a supporting structure, whereby the arms can swing vertically thereabout, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, a pair of cylinders pivotally connected together above each arm, a spiral compression spring in each cylinder, and a rod in each cylinder adapted to compress its spring on outward movement thereof, two rods being

connected to the supporting structure, and the other two rods to the free ends of the arms whereby to act as a shock absorber when lowering the frame, as a support for the frame in the lowered position, and acting to aid in raising the frame.

5. An awning frame comprising the combination of a pair of relatively spaced vertical rods secured to a supporting structure, a member mounted to slide on each rod, a compression spring on each rod above the member, two relatively spaced side arms having the inner ends pivotally connected to the said members for vertical swinging movement, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, means pivotally supported on the supporting structure and pivotally connected to the arms intermediate the ends thereof, and means including resilient means forming a connection between the supporting structure and the first mentioned means, the compression springs acting as shock absorbers when lowering the frame and acting to initially raise the first said means when raising the frame, the third mentioned means acting as a shock absorber when lowering the frame, acting to support the frame in the lowered position and assisting in raising the frame.

6. An awning frame comprising the combination of a pair of relatively spaced vertical rods secured to a supporting structure, a member mounted to slide on each rod, two relatively spaced side arms having the inner ends pivotally connected to the said members for vertical swinging movement, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, and rods pivotally supported on the supporting structure and pivotally connected to the arms intermediate the ends thereof, the frame being adapted to pivot about the last said pivot connections when raising the frame.

7. An awning frame comprising the combination of a pair of relatively spaced vertical rods secured to a supporting structure, a member mounted to slide on each rod, a compression spring on each rod above the member, two relatively spaced side arms having the inner ends pivotally connected to the said members for vertical swinging movement, means connecting the free ends of the arms, an awning roller on the supporting structure above the said pivot connections and adapted to carry an awning connected to the said means, and rods pivotally supported on the supporting structure and pivotally connected to the arms intermediate the ends thereof, the frame being adapted to pivot about the last said pivot connections when raising the frame and the said springs acting as shock absorbers when lowering the frame and aiding in the initial raising of the frame.

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