

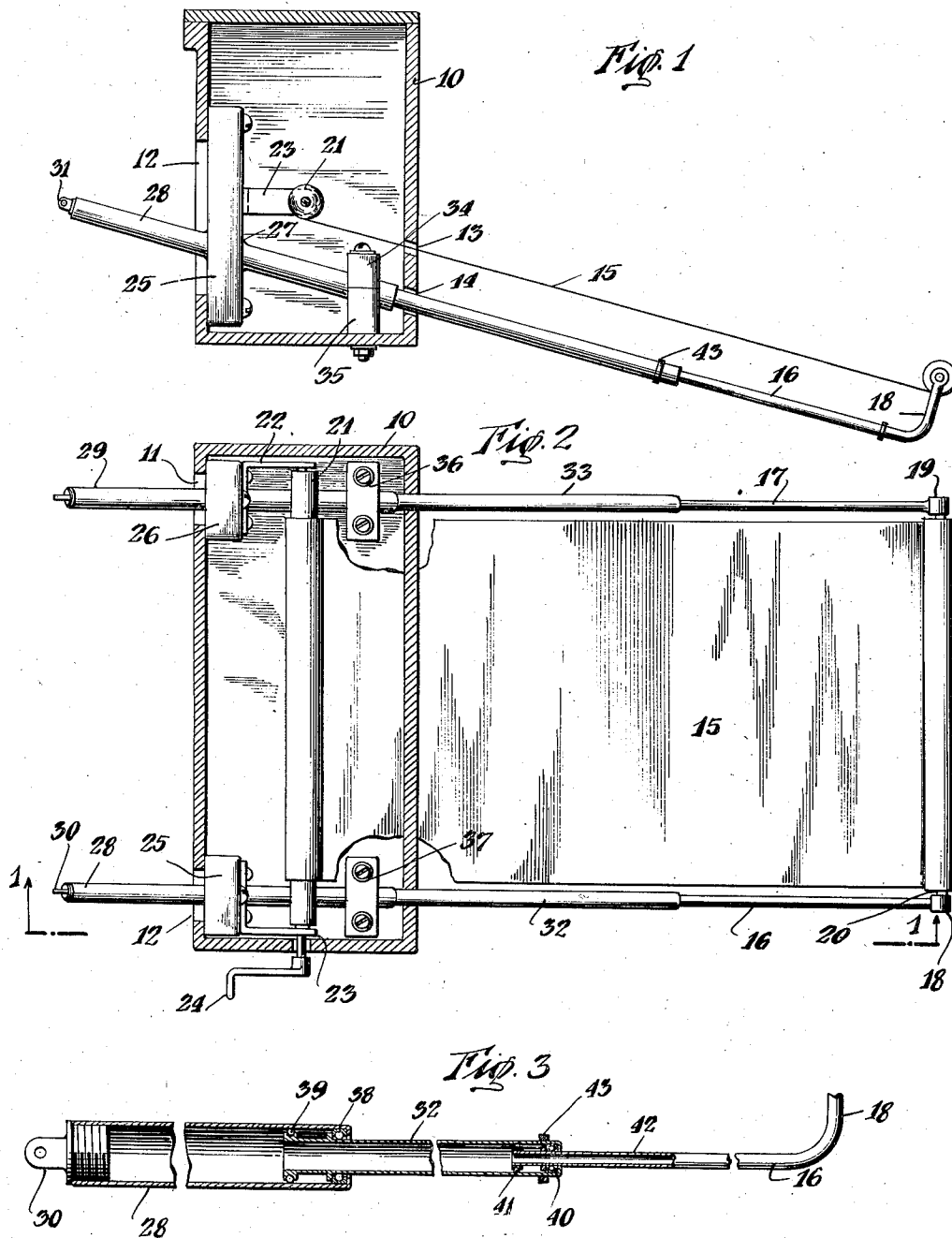
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DISAPPEARING AWNING ARMS

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DISAPPEARING AWNING ARMS

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7 Claims. (Cl. 156—44)

My invention relates to improvements in awnings, particularly in the arms by means of which the awning of a store window or the like is held in its extended or shade producing position, and it is the principal object of my invention to provide telescoping and disappearing awning arms and thus dispense with the unsightly and cumbersome shear-like acting bars, the contiguous parts of which slide relatively to each other in a direction parallel to their plane of contact.

Another object of my invention is the provision of awning arms composed of a plurality of telescoping parts of round, square or any other suitable cross-section, the individual parts of which are equipped with ball-bearings facilitating the operation of the arms and so arranged that the bearings are arranged at one end of a telescoping part of the awning arm and on the outside of this part while, when the parts are assembled, these bearings are located within the next adjoining parts of the awning arms.

A further object of my invention is the provision of awning arms, the parts of which are equipped with suitably arranged stop rings to prevent a separation of the parts during the operation of the arms, while the end member or part of each arm is closed by a cap or the like to prevent an unlimited inwardly directed movement of the arms.

A still further object of my invention is the provision of suitable clamping brackets for guiding and holding the rear members of the telescoping arms obliquely through openings in the front and rear walls of a box which contains the awning roller and operating parts in order to provide for a certain play according to the slant of the arms necessitated in various constructions.

These and other objects and advantages of my invention will become more fully known as the description thereof proceeds, and will then be specifically defined in the appended claims.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a sectional side elevation of a window box equipped with an awning having arms constructed according to my invention, seen along the line 1—1 of Figure 2.

Fig. 2 is a top plan view of my awning construction with the awning in its extended shading position and the window box in section.

Fig. 3 is a side elevation of one of the telescoping arms, partly in section to illustrate the interior construction.

As illustrated, a box 10 of any suitable material, size and shape suitable for installation in a show

or other window has openings 11, 12 in its rear wall and openings 13, 14 in its front wall, the latter for the passage of the shade 15 and a member of the telescoping arms 16, 17. The outer ends of the end members of the arms are shaped to form upwardly directed arms 18, 19 connected by means of a bar 20 about which the outer end of the shade 15 is wound and held. The inner end of the shade material is wound as customary about a roller 21 journaled in bearing brackets 22, 23 and adapted to be operated by means of a crank 24 on its outwardly extending end, or through suitable interposed gears. The brackets 22, 23 are preferably attached to suitably constructed plates 25, 26 secured to the inner wall of the box 10 in front of the openings 11, 12 therein and said plates being provided with slanting sockets 27 for the passage of the members 28, 29 on the inner ends of the telescoping arms, the ends of which are closed by means of the caps 30, 31 or the like to limit the outward movements of the next adjoining members 32, 33 of the telescoping arms. The outer ends of the members 28, 29 are each slantingly held in suitable clamping bearings 34, 35 which are provided with holes 36, 37 for clamping bolts, all arranged within the box 10 near the front wall thereof.

The members 32, 33 are equipped at their rear ends with ball bearings 38, 39 formed about their outer circumference and received in the members 28, 29 on the inner ends of the arms 16, 17, while similar ball-bearings 40, 41 are formed on the outside of members 42 received in the intermediate members 32, 33 of arms 16, 17 carrying the hook arms 18, 19. It will be clear that according to circumstances any number of such telescoping arms and members may be provided. Suitable stop rings 43 are arranged at certain distances from the ends of the telescoping arm members to limit their telescoping movements.

It will be understood that I have described and shown the preferred form of my invention only as one example of the many possible ways to practically construct the same, and that I may make such changes in the general arrangement and in the construction of the minor parts of my invention as come within the scope of the appended claims without departure from the spirit of my invention and the principles involved.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent is:

1. Disappearing arms for awnings comprising a plurality of telescoping members, ball bearings on said members to facilitate their telescoping

operation, means to limit the outward movements of said members, and means to limit their inward movement.

2. Disappearing awning arms comprising a plurality of telescoping members, ball bearings on the outer face of each member at one end thereof, for facilitating their operation, means to slantingly hold said arms, closures for the rear members of said telescoping members to limit their inward movement, and means to limit the outward movement of the members relatively to one another.

3. In an awning construction including a window box having a plurality of openings, means within said box to wind and unwind the awning, and a plurality of telescoping arms connected at their outer ends to the outer end of the awning to guide the awning during its winding and unwinding, plates within said box through which the rear members of said telescoping members are slantingly and adjustably retained.

4. The combination of window box with an awning adapted to be wound into said box and unrolled therefrom with arms laterally disposed to said awning and connected thereto at one end, a plurality of telescoping members constituting said arms, means to slantingly hold the rear members of said telescoping members passing through said box, a closure for the respective rear ends of said rear members, ball bearings to facilitate the

operation of said telescoping members, and means on each of said members to limit their outward movement.

5. In disappearing arms for awnings, the combination of a plurality of telescoping members, ball bearings formed at the outer faces of some of said members at one end thereof, the rear member having its free end closed by a cap to limit the movement of the adjoining member during the telescoping operation through said outermost member, the innermost of said members having its outer end hook shaped, a rod connecting the hook shaped ends of both arms to which the end of the awning is fastened, and stop rings on the intermediate members to limit their relative movements.

6. In combination with disappearing arms of an awning, guides to slantingly hold said arms at their inner ends, said guides composed of slotted plate members, one of said plate members being in the form of a clamp jaw.

7. In an awning construction of the character described a window box having openings in its rear wall, plate members normally closing said openings, slots in said plate members awning guiding telescoping arms passed through said slots, means to lock said arms in adjusted positions, brackets on said plates, and a roller for the awning journaled in said guide brackets.

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