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A. D. AYRES

AUTOMATIC MEANS FOR MANIPULATING AND CONTROLLING THE CATCHES OF UMBRELLAS

Filed Dec. 16, 1921

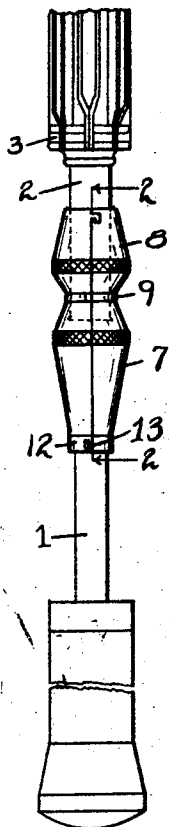


FIG. I.

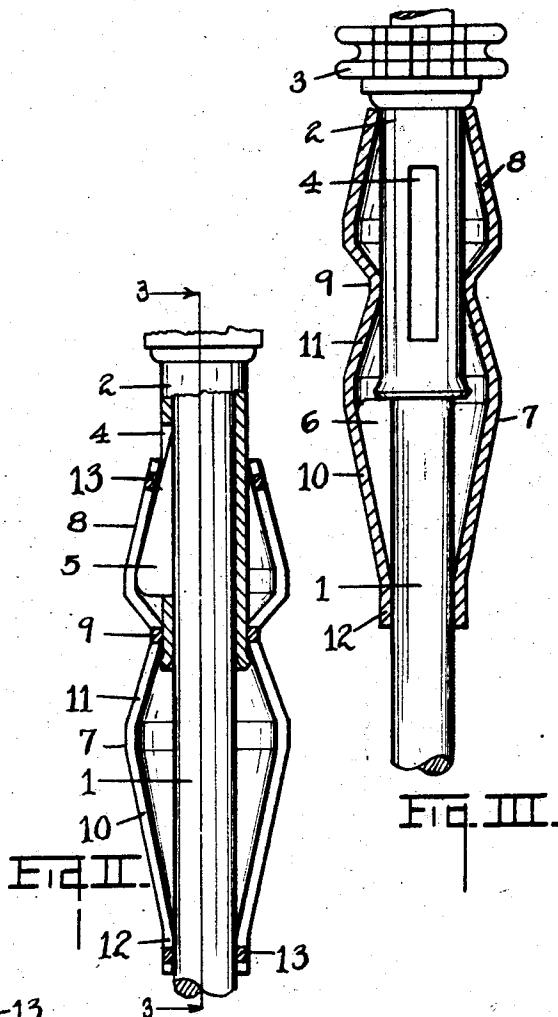


FIG. III.

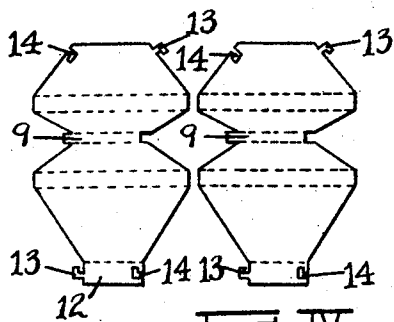


FIG. IV.

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AUTOMATIC MEANS FOR MANIPULATING AND CONTROLLING THE CATCHES OF UMBRELLAS.

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To all whom it may concern:

Be it known that I, ANDRUS D. AYRES, a citizen of the United States, residing at the city and county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Automatic Means for Manipulating and Controlling the Catches of Umbrellas, of which the following is a specification.

This invention relates to improved automatic means for manipulating and controlling the catches of umbrellas.

The objects of the invention are:

First, to provide such a structure which can be readily applied as an attachment to the usual form of umbrella now in use.

Second, to provide an improved structure with effective control for both the upper and lower catches.

Further objects, and objects pertaining to details and economies of construction and operation will definitely appear from the detailed description to follow.

I accomplish the objects of the invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claim.

A structure which is a preferred embodiment of my invention is fully illustrated in the accompanying drawing, forming a part of this application, in which:

Fig. I is a detail view of the handle portion of an umbrella with the runner control sleeve in the lowered position.

Fig. II is an enlarged detail sectional view on a line corresponding to line 2—2 of Fig. I, showing the relation of the control sleeve to the catch when in the lowered position.

Fig. III is an enlarged detail section on a line corresponding to line 3—3 of Fig. II, showing the control sleeve in the up position, the position of the upper catch thus appearing.

Fig. IV is a detail view of the sheet metal blanks from which my improved control sleeves are formed.

In the drawing the sectional views are taken looking in the direction of the little arrows at the ends of the section lines and similar numerals of reference refer to similar parts throughout the several views.

The parts of the drawing will be considered by their numbers. 1 is the stick.

2 is the usual runner carrying the spreader nut 3 at its upper end. This runner 2 contains the slot 4 for engagement with the usual lower catch 5,—see Fig. II. The upper catch 6 engages underneath the runner, as appears in Fig. III.

Disposed about the runner is the control sleeve 7 having an enlarged portion 8 at its upper end conformed to the sloping portion of the catch 5 and contracted sharply to the engaging portion 9, the lower portion being expanded at 10 and conformed to the sloping portion of the upper catch 6 and with an inclined portion 11 contracting to the engaging portion 9.

The engaging portion 9 fits snugly the runner 2, but slides freely thereon and is of such length that considerable movement is possible from the lowermost position to the upper position against the spreader nut 3. The lower end has a close engaging portion 12 that similarly passes up and down upon the stick.

The sleeve is preferably made in two symmetrical halves having engaging hook portions 13 at each end adapted to fit into corresponding recesses 14 in the opposite half.

The central engaging portions 9 are notched with square notches to guide and locate the parts in position. These hooked and notched portions enable the structure to be readily snapped upon the runner and stick of an umbrella, so that the devices can be very readily applied as an attachment.

Where the runner is being installed at the time of the manufacture of the umbrellas the halves may be brazed or welded together insuring a slightly better finish than is possible with the attachment.

With my improved control sleeve in place the catches will be operated automatically by pushing or pulling upon the control sleeve.

A glance at Fig. II where the structure is shown in the lowered position will show that by grasping the control sleeve and pushing upwardly on it the catch 5 will be depressed by the action of the contracted portion beneath and as soon as it moves to the upper position the catch will be depressed and the runner can be pushed to the top, when it will pass over the upper catch 6, which will engage underneath the said runner. The control sleeve will be retained in place of course by friction. When

it is desired to lower the umbrella it is grasped and pulled down when the upwardly contracted portion 11 rides upon the catch 6 and depresses the same so that the
5 umbrella can be pulled down and the catch depressed automatically by that operation.

My improved sleeve gives a very superior finish to the runner providing an effective hand hold therefor. I have indicated that
10 the same can be considerably modified and I desire to claim the invention specifically and broadly as pointed out in the appended claim.

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

The combination with the runner and stick and catches of an umbrella, of a con-

trol sleeve composed of opposed longitudinal symmetrical halves, having a contracted cen- 20 tral portion adapted to fit and slide upon the lower portion of said runner, and a lower portion contracted to fit and slide upon the stick of the umbrella, and enlarged portions to accommodate the catches 25 of the umbrella, with abruptly inclined portions at the center to automatically actuate the said catches when the control sleeve is pushed up or pulled down, locating lug means at the contracted central portion, and 30 dovetail engaging means toward each end, as specified.

In witness whereof, I have hereunto set my hand and seal.

ANDRUS D. AYRES. [L. S.]