

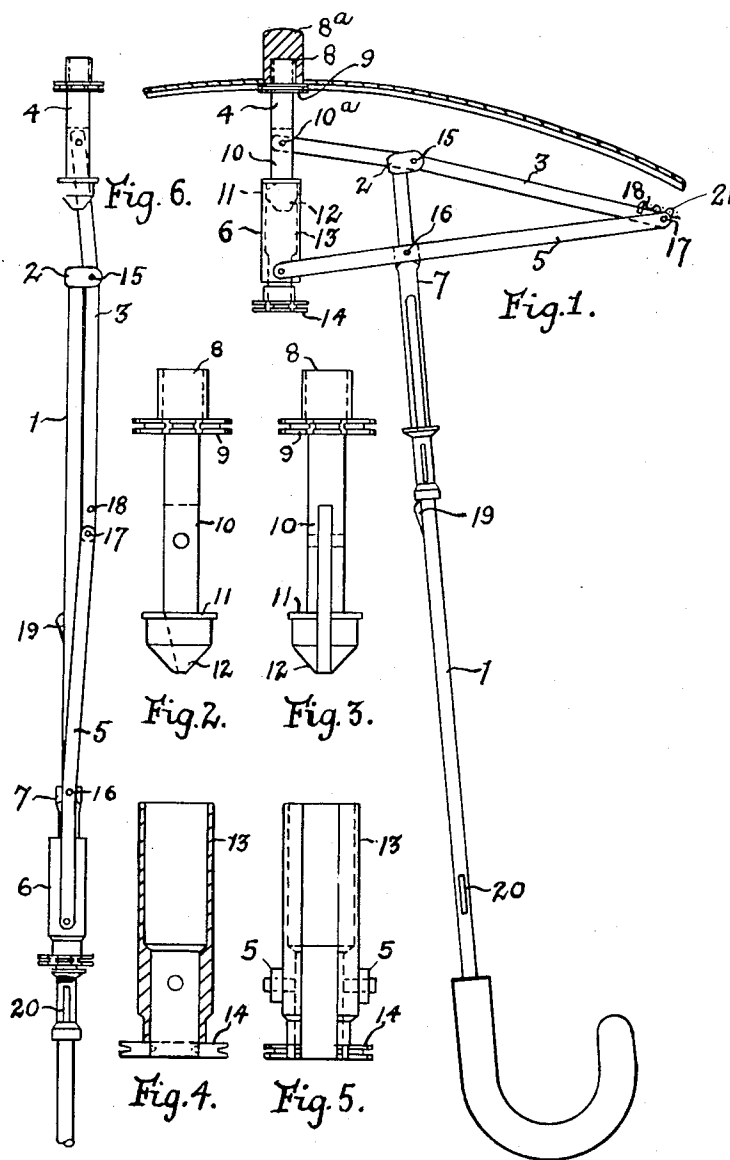
Feb. 6, 1934.

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1,945,685

UMBRELLA

Filed June 18, 1932



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1,945,685

UMBRELLA

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ScotlandApplication June 18, 1932, Serial No. 618,056,
and in Great Britain June 23, 1931

3 Claims. (Cl. 135—20)

This invention relates to an umbrella the movable parts of which are manipulated from a main stick which, when the umbrella is fully opened for use, is eccentrically disposed in relation to the canopy or cover of the umbrella; this off-setting of the main stick enabling the user advantageously to place himself in a central position under the area of protective covering provided by the canopy.

10 An umbrella made according to the invention comprises the parts which are hereinafter described in detail with reference to the accompanying drawing, in which:—

15 Fig. 1 is a partly sectional elevation of the umbrella when fully opened.

Fig. 2 is a side elevation of the rib carrier.

Fig. 3 is a side elevation of the rib carrier at right angles to Fig. 2.

20 Fig. 4 is a sectional elevation of the spreader wire carrier.

Fig. 5 is a side elevation of the spreader wire carrier.

Fig. 6 is a partly sectional elevation of the umbrella when fully closed.

25 Shown at 1 of Fig. 1 is the main stick of the umbrella to upper end of which is secured a lug 2 which provides a pivotal bearing for a lever 3.

30 The said lever 3 is pivoted to a rib carrier 4, which is more fully described hereinafter, and to a double lever 5.

35 The said double lever 5 is pivoted to a spreader wire carrier 6 as shown in Figure 5 which is hereinafter described in detail, and, at a useful point along its length, with a runner 7 slidably mounted on the main stick 1.

Figs. 2 and 3 show the rib carrier hereinbefore mentioned.

The part 8 is a tubular extension providing means for the attachment of a ferrule 8^a.

40 The part 9 is cylindrically shaped and is grooved circumferentially to receive a wire which forms, in accordance with common practice, a pivotal bearing for all the umbrella ribs. The circumference is cut at suitable intervals with short radial, or nearly radial, slots in which are received the ends of the said umbrella ribs.

45 The lower part 10 of the rib carrier 4 is bored to receive a pivot 10^a by means of which it is attached to the lever shown at 3 of Fig. 1.

50 A collar 11 is made to bear, when the umbrella is fully opened, against the top edge of the spreader wire carrier 6.

55 The part 12 is a projection of conical or other shape which, when the umbrella is fully opened,

is made to fit into the upper portion of the said spreader wire carrier.

The parts 10, 11 and 12 are slotted to receive a part of the lever shown at 3 of Fig. 1 when the umbrella is closed.

60 Figs. 4 and 5 show the hereinbefore mentioned spreader wire carrier which is bored throughout its length.

65 The upper portion of the cylindrical part 13 is designed to receive, when the umbrella is fully opened, the projection shown at 12 of Figs. 2 and 3. At the same time the collar shown at 11 of Figs. 2 and 3 is made to meet the top edge of the spreader wire carrier.

70 The meeting of the said parts 11, 12 and 13 in the manner above stated prevents both the rib carrier and the spreader wire carrier from turning on their pivots with the levers shown at 3 and 5 respectively of Fig. 1 and thus prevents distortion of the umbrella canopy under pressure 75 of wind.

80 The said part 13 or Figs. 4 and 5 is bored radially to receive pivots by means of which attachment is made with the two parts of the lever shown at 5 of Fig. 1 which are attached externally to the said part 13.

85 The part 14 is cylindrically shaped and is grooved circumferentially to receive a wire which forms, in accordance with common practice, a bearing for all the spreader wires of the umbrella. The circumference is cut at suitable intervals with short, radial, or nearly radial slots into which are received the ends of the said spreader wires.

90 A portion of the spreader wire carrier is cut away along its whole length to enable the runner shown at 7 of Fig. 1 to pass into it, when the umbrella is fully closed.

95 The pivot shown at 17 of Fig. 6 which connects the levers 3 and 5 is, when the umbrella is fully closed, thrown out of alignment with the pivots shown at 15 and 16 which connect the lug 2 with the lever 3 and the runner 7 with the lever 5 respectively. This arrangement of the said pivots 15, 16 and 17 is required in order that the mechanism may move easily from its fully closed 100 position as soon as an upward pressure is exerted on the runner 7.

105 The levers 3 and 5 are furnished with slight bends or shoulders in order that the pivots 15, 16 and 17 may be arranged in the particular manner indicated and also in order that the rib carrier 4 and the spreader wire carrier 6 may, when the umbrella is folded, take up positions in alignment with the main stick 1 as shown in Fig. 6.

The lever 3 is bored at 18 in order to furnish means for the attachment of a small cover of cloth 21 shown in section in Figure 1, or other material, which is made to rest upon the top-edge of the lever 3 above the said hole 18 and to extend for a short distance beyond the point of pivotal attachment of the levers 3 and 5. The said cover is secured to the lever 3 by means of stitches which are passed through the hole 18, and is provided as a means for preventing the levers 3 and 5 from wearing against the cover of the umbrella when this is opened or is being opened.

The lever shown at 5 of Fig. 1 is made of two equal parts which are pivoted externally with the spreader wire carrier 6, the runner 7 and at each side of the lever 3.

Fig. 1 shows the umbrella in its fully opened position.

If the runner 7 be moved down the main stick 1 as far as associated mechanism will allow, the rib carrier 4 and the spreader wire carrier 6 will be drawn apart and will take up positions in alignment with the main stick 1 as shown in Fig. 6.

The umbrella is maintained in its fully opened or fully closed positions by the customary means of spring catches shown at 19 and 20 in Fig. 1.

I claim:

1. An umbrella comprising a rib carrier, a spreader wire carrier detachably receiving said rib carrier when the umbrella is opened, levers connected at one end to said rib carrier and spreader wire carrier respectively, the outer ends of said levers pivotally connected together and means for pivotally connecting a main stick and runner thereon to said levers in an off set position in relation to the wire carrier.

2. An umbrella having in combination a rib carrier, a spreader wire carrier receiving the inner end of said rib carrier when the umbrella is opened, a lever pivotally connected at one end to said rib carrier, a pair of correspondingly shaped levers pivotally connected at one end to said spreader wire carrier, the free ends of all of said levers pivotally connected together, a main stick pivotally connected to the first mentioned lever in an off set position in relation to the rib carrier, a runner slidably mounted upon said main stick pivotally connected to the pair of correspondingly shaped levers and means for retaining the component parts in an open position and means for retaining said component parts in a closed position.

3. An umbrella having in combination a rib carrier, a collar formed on the inner end of said rib carrier, a hollow spreader wire carrier receiving said collar when the umbrella is opened out, a lever pivotally connected at one end to said rib carrier and being free to turn in a longitudinal slot cut in the rib carrier, a pair of correspondingly shaped levers pivotally connected at one end to said spreader wire carrier, the free ends of said levers being pivotally connected together, a guard arranged over the top edge of the pivoted ends, a main stick, a lug integral with the end of said main stick pivotally connected to the first mentioned lever in an off set position in relation to the wire carrier, a runner slidably mounted upon the main stick pivotally connected to the pair of levers in an off set position in relation to the spreader wire carrier, two spring catches arranged on the main stick alternately engaging with the runner when the umbrella is opened out or closed.

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