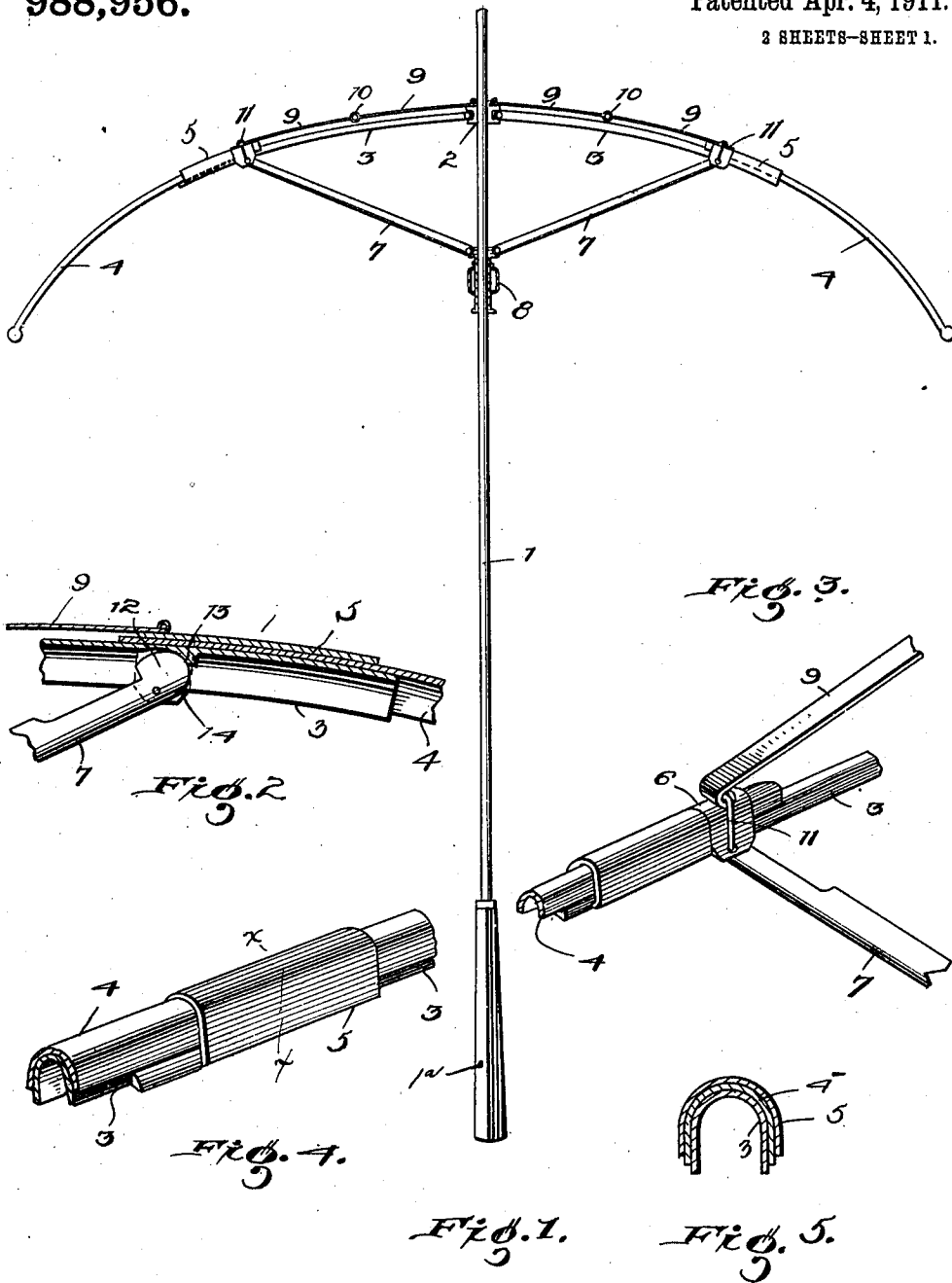


L. J. WHITTAKER, DEC'D.
L. B. WHITTAKER, ADMINISTRATRIX.
FOLDING UMBRELLA.
APPLICATION FILED OCT. 4, 1910.

988,956.

Patented Apr. 4, 1911.

2 SHEETS-SHEET 1.



Witnesses

J. W. Cady
E. W. Cady

Inventor

Lora B. Whittaker
Administratrix for the estate of
Leland J. Whittaker.

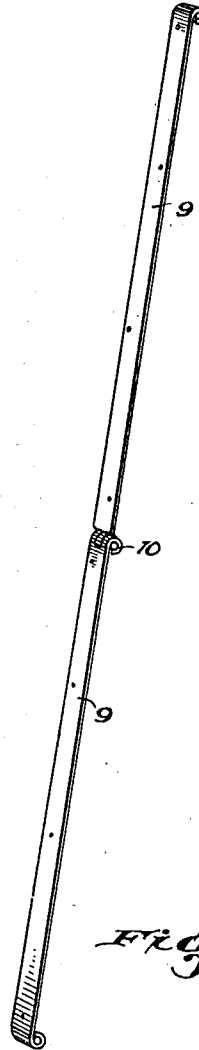
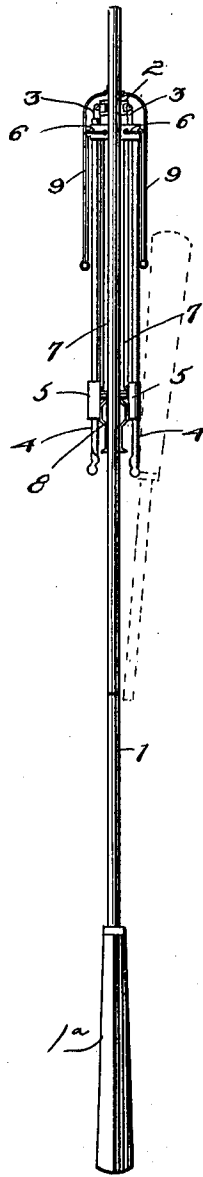
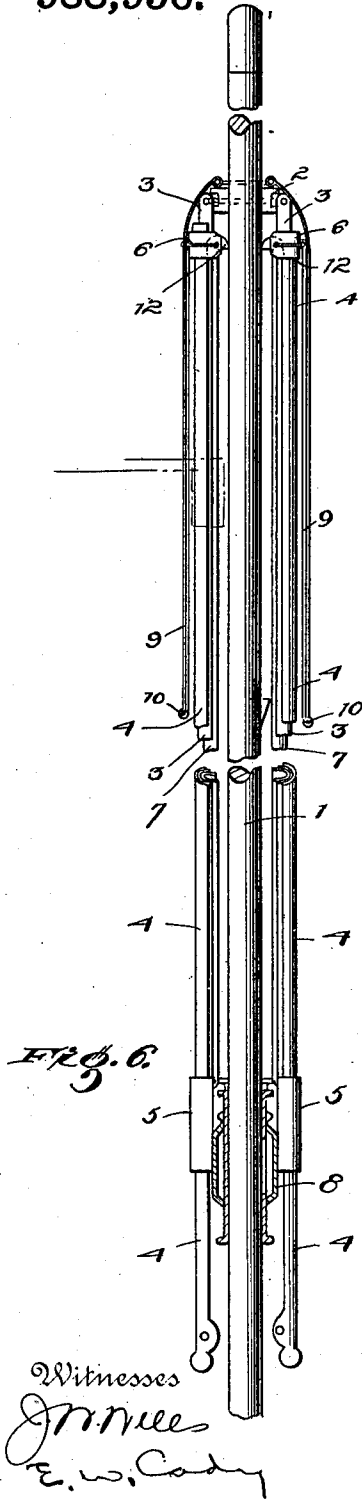
By *E. C. Crooman* Attorney.

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2 SHEETS-SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LELAND J. WHITTAKER, DECEASED, LATE OF FULTON, NEW YORK; LORA B. WHITTAKER, OF HAMILTON, NEW YORK, ADMINISTRATRIX.

FOLDING UMBRELLA.

988,956.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed October 4, 1910. Serial No. 585,253.

To all whom it may concern:

Be it known that LELAND J. WHITTAKER, late a citizen of the United States, formerly residing at Fulton, in the county of Oswego and State of New York, did invent certain new and useful Improvements in Folding Umbrellas; of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to umbrellas, and has a special reference to umbrellas so constructed and arranged that the ribs and stays of the umbrella may be folded up compactly.

The invention has for its object to provide an improved umbrella of this kind, which will be simple in construction and which may be effectively folded up into compact form.

The invention further has for its object to provide an improved umbrella having its frame so constructed and arranged as to be compactly folded up, and also when unfolded to be held firmly in place without danger of collapse.

Referring to the accompanying drawings: Figure 1 is a view in elevation showing an umbrella stick and a pair of foldable ribs and braces constructed in accordance with this invention. Fig. 2 is an enlarged detail view showing a portion of a foldable rib and the connection of a brace or stay therewith, the rib being shown in longitudinal section. Fig. 3 is an enlarged detail view in perspective of a portion of one of the foldable ribs and stays connected thereto. Fig. 4 is an enlarged detail view showing the connection of the foldable parts of the rib. Fig. 5 is a detail view in cross section on the line X—X of Fig. 4. Fig. 6 is an enlarged view in elevation and partly broken away showing a portion of an umbrella stick and ribs and braces constructed in accordance with this invention, and folded against the stick. Fig. 7 is a view in elevation of an umbrella stick and the ribs and braces constructed in accordance with this invention, and folded in compact position. Fig. 8 is an enlarged detail view of one of the stays employed with the ribs for sustaining the umbrella covering.

In carrying out this invention a stick, 1, is provided having adjacent to its tip the usual collar, 2, secured thereto, to which is

hinged the ribs of the umbrella, said ribs in accordance with this invention being formed of the foldable sections, 3 and 4, the sections 4 being slidable into folded position on the sections 3. Each of said sections is preferably formed of a thin piece of channel iron or steel of a U-shape, the sections 4 extending over the sections 3 and slidable thereon. The sections 3 and 4 are held together by means of an elongated sleeve, 5, which, as shown, is of a U-shape and bent about the sections 3 and 4 so as to hold them together, and yet permit of the section 4 sliding upon the section 3. The sleeve, 5, is rigidly fastened to the lower end of the section 3 of the rib, and upper end of section 4 is provided with a sleeve or collar, 6, which is rigidly secured to the section 4, and is of a U-shape so as to straddle one end of the brace or stay, 7, which is hinged thereto, in any suitable manner, as hereinafter will be more particularly described. The other end of the brace, 7, is hinged to the sleeve, 8, slidable on the stick, 1.

In order that the covering of the umbrella may be properly secured in place on the ribs, 4, and also be prevented from dropping in folds when the umbrella frame is collapsed and folded up into compact shape, as shown in Fig. 7, suitable means are provided for this purpose,—as for example,—the braces or stays formed of two sections, 9, 9, hinged together at their meeting ends at 10, and at their outer ends to the collar, 2, and to the sleeve, 6. The ends of the sections, 9, are hinged to sleeve, 6, by means of a wire loop, 11, to which the end of the brace, 7, is hinged. In order that the sections of the ribs may not slide beyond a fixed point when the umbrella frame is expanded suitable means is provided for locking the braces, 7, as for example, by forming the end of the braces, 7, in a large circular head, 12, which is seated in a curved recess portion, 13, of a rib section, 4, and located adjacent to a shoulder, 14, in the rib, 4, so that when the parts are expanded the end of the braces, 7, will be held in locked position, thereby preventing the sections of the rib from sliding beyond a fixed point at the time the frame of the umbrella is expanded.

It will readily be seen that by means of the parts constructed and arranged as here-

inbefore set forth, when the sliding sleeve 8 is pushed up from the position shown in Fig. 6, the parts of the umbrella frame will be expanded to the position shown in Fig. 1.

5 When it is desired to close the umbrella into the compact form, shown in Fig. 7, the sleeve, 8, is drawn down on the stick, 1, and the sections, 4, of the ribs, are pushed upward, said sections sliding on the sections,

10 3, of the ribs, and thereby carrying with them the braces 7, until the parts are brought into the position shown in Fig. 7, the sections 9 of the stays or braces connecting the sleeves 6 with the collar 2 automatically folding up upon themselves, and during such operation first buckling outward so as to hold the material of the umbrella covering away from the slidable parts, and at the same time maintain it in

20 such a position as not to fall down in loose folds about the frame of the umbrella. When the umbrella is opened the sections 4 of the ribs are drawn downward so as to elongate the ribs and in this movement, the foldable sections, 9, are thrown out so as to

25 hold the loose umbrella covering away from the sliding portions of the ribs. I provide a detachable handle 1^a which is adapted to fit on a lower end of the rod 1 and is adapted

to be detached therefrom when the umbrella 30 is in its folded position.

Having described the invention, I claim:

In a foldable umbrella of the kind described, an umbrella stick, a sleeve slidable upon said stick, ribs connected to the umbrella stick and formed in sections connected together by sleeves and slidable upon one another, a number of braces, each of said braces being hinged at one end to one of the sleeves which is slidable upon one of said sections, and at the other end to the sleeve slidable upon the stick, a pair of strips for holding the umbrella covering away from the slidable portions of the ribs, each of said pairs of strips being hinged at their adjacent ends, and one of said strips being hinged at its other end to the umbrella stick and the other strip being hinged at its outer end to said sleeve slidable upon one of the sections. 50

In testimony whereof I hereunto affix my signature in presence of two witnesses.

LORA B. WHITTAKER,

Administratrix of the estate of Leland J.

Whittaker, deceased.

Witnesses:

E. GRACE RICE,

CLAUDIA H. NELSON.