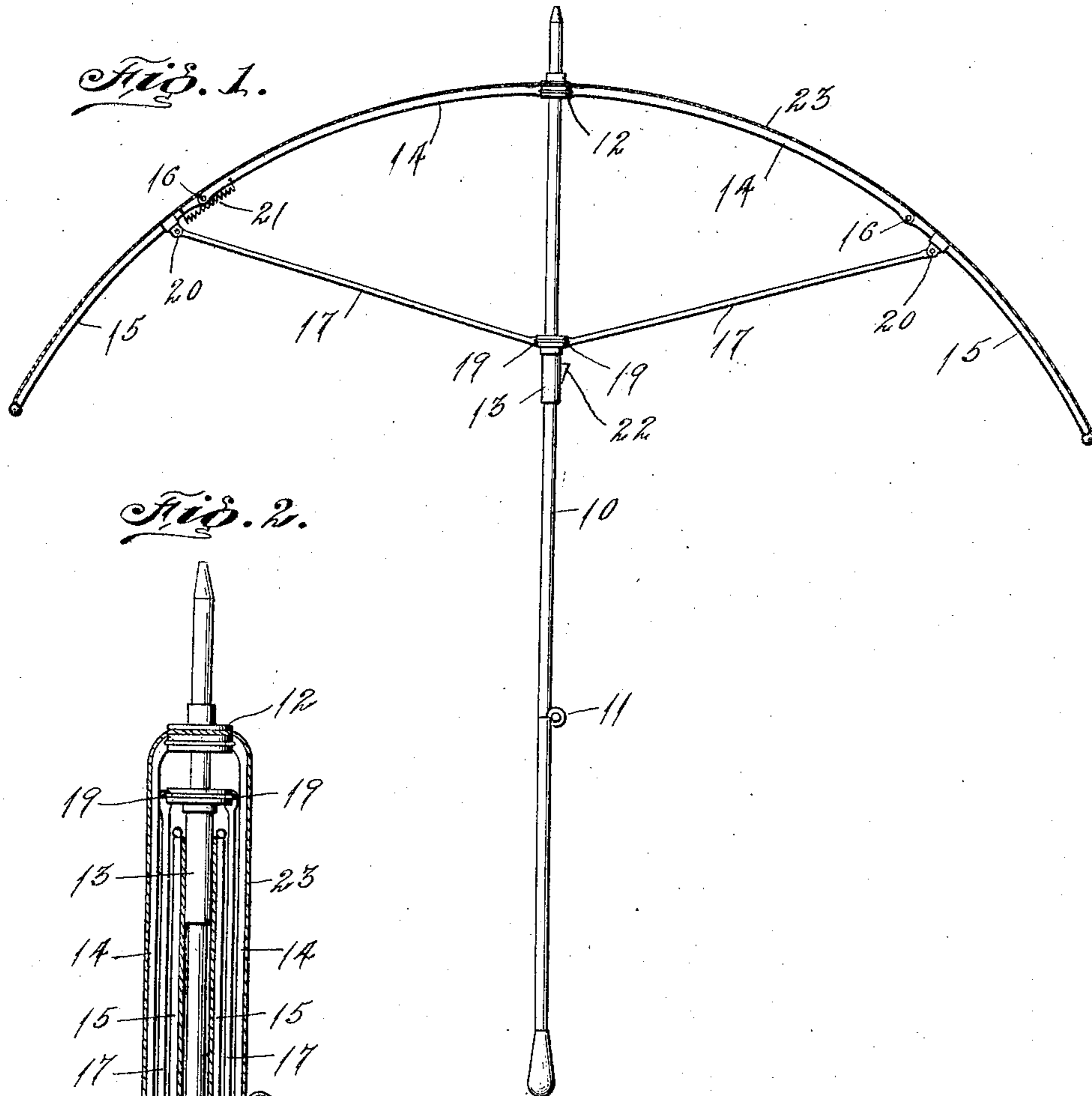


J. A. GREGORY.
FOLDING UMBRELLA.
APPLICATION FILED OCT. 19, 1910.

998,503.

Patented July 18, 1911.



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UNITED STATES PATENT OFFICE.

JAMES A. GREGORY, OF PLANTERSVILLE, MISSISSIPPI.

FOLDING UMBRELLA.

998,503.

Specification of Letters Patent. Patented July 18, 1911.

Application filed October 19, 1910. Serial No. 587,901.

To all whom it may concern:

Be it known that I, JAMES A. GREGORY, a citizen of the United States, residing at Plantersville, in the county of Lee, State of Mississippi, have invented certain new and useful Improvements in Folding Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to folding umbrellas of that general class designed to fold simultaneously with the closing movement.

The object of the present invention is to provide a device of this character which will have its ribs jointed, the outer sections of the ribs and also the braces of the umbrella being adapted to be confined between the inner sections of the ribs and the stick after the umbrella is in folded position, so that the central portion of the umbrella cover will be outermost and will conceal all of the ribs and the braces when the umbrella is folded.

In many ordinary kinds of folding umbrellas employing jointed ribs the outer sections of the ribs fold outwardly and upwardly when the umbrella is folded and are therefore exposed so that the umbrella presents an unsightly appearance. The present invention aims to remedy this difficulty by causing the outer sections as above stated to fold inwardly so as to be entirely concealed, this being accomplished by a novel manner of connecting the ribs and outer rib sections together as will hereinafter be fully described.

In the accompanying drawing forming part of this specification Figure 1 is a side elevation of an umbrella constructed in accordance with my invention in open position with parts removed. Fig. 2 is a view in elevation showing in folded position the parts shown in Fig. 1.

Referring now to the drawing in which like characters of reference designate similar parts in the views shown, 10 designates an umbrella stick made preferably in two sections, said sections being hingedly connected together as shown at 11 so that the grip section may fold upwardly against the tip section. Fixed to the tip section is a notch 12 and arranged upon the same section is a runner 13, both these parts being of the usual construction.

Pivotally connected to the notch are a plu-

rality of radially extending ribs each comprising an inner section 14 and an outer section 15, both sections being bowed at their confronting ends pivotally connected together by a pivot pin 16. A plurality of braces 17 are pivotally connected at their inner ends as shown at 19 to the runner the outer ends of these braces being pivotally connected as shown at 21 to the outer rib sections intermediate the pivots 16 and tip ends of these sections. A spiral spring 21 is terminally connected at one end to one of the inner rib sections and at its opposite end to the outer section of this rib. A spring catch 22 is arranged on the stick and engages the runner when the latter is in its lowest limit of movement and when in such a position the umbrella is in open position as clearly shown in Fig. 2.

It will be observed by referring to Fig. 1 that when the runner is moved up nearly to the notch that through the instrumentality of the braces 19 the outer rib sections will be folded inwardly and upwardly and when the notch reaches its pivotal limit of movement on the stick all the outer rib sections together with all the braces will be confined between the inner rib section and the stick. When in this position the central portion of the umbrella cover 23 will conceal all of the ribs and braces from view so that the umbrella presents a neat appearance.

In opening the umbrella it is simply necessary to grasp the runner and move it downwardly upon the stick in the direction of the spring catch until in engagement with the latter. The ribs move downwardly upon the stick during this operation and causing the outer section of the ribs to move into alignment with the inner sections of the ribs and all the ribs to simultaneously move to open position as shown in Fig. 2. During this movement of the parts the helical spring 21 will be enlarged and will store up energy to return the parts to their folded position upon the release of the runner. The bowed pivotally connected ends of the rib sections cooperate when the sections are folded to form rounded corners over which the umbrella cover may be drawn extremely taut without being injured as in ordinary umbrellas wherein no such rounded joints exist.

What is claimed is:—

A folding umbrella including a stick, a notch on said stick, ribs pivoted to said notch, each rib comprising an inner and

outer section having bowed confronting ends
pivotally connected together, a runner on
said stick, braces pivotally connected at their
inner ends to said runner and pivotally con-
5. nected at their outer ends to said outer rib
sections intermediate the pivots and tip ends
of said outer section, and operating to fold
the said outer sections inwardly whereby all
the outer rib sections and the braces are con-
10. fined between the inner rib sections and stick

when the runner is slid up nearly to said
notch, and a spiral spring terminally con-
nected to both sections of one rib and operat-
ing to move said sections to folded position.

In testimony whereof, I affix my signa- 13
ture in presence of two witnesses.

JAMES A. GREGORY.

Witnesses:

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J. M. WITT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."