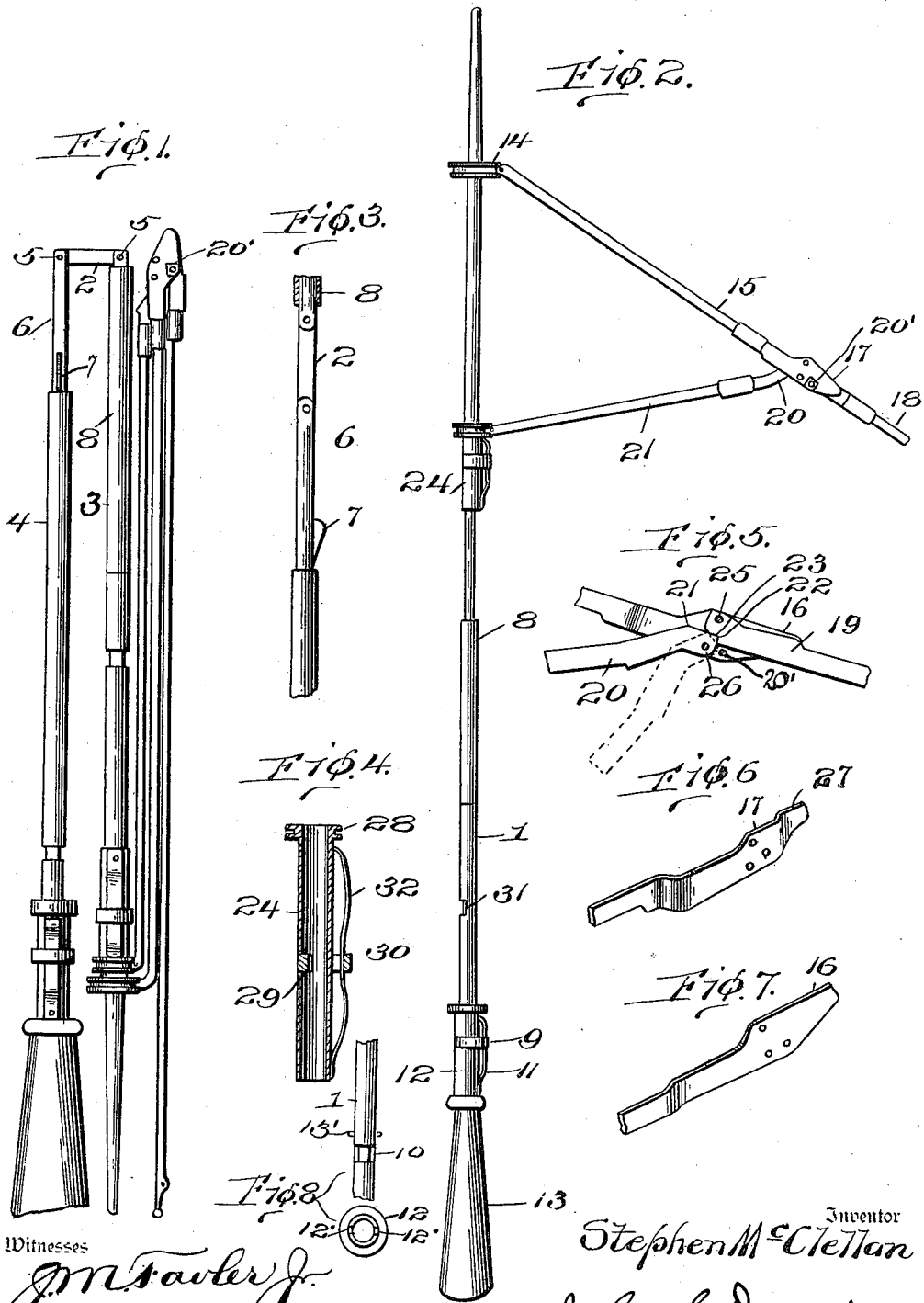


S. McCLELLAN.
FOLDABLE UMBRELLA.
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1,013,555.

Patented Jan. 2, 1912.



Witnesses

M. Fowler Jr.
R. R. Duffie

By

Stephen M. McClellan

John D. Duffie

Attorney

UNITED STATES PATENT OFFICE.

STEPHEN McCLELLAN, OF BROOKLYN, NEW YORK.

FOLDABLE UMBRELLA.

1,013,555.

Specification of Letters Patent.

Patented Jan. 2, 1912.

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To all whom it may concern:

Be it known that I, STEPHEN McCLELLAN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Foldable Umbrellas, of which the following is a specification.

My invention has relation to foldable umbrellas and relates especially to improvements over my invention Ser. No. 561,819, filed May 17, 1910.

The main object of this invention is to lock the lower sections of the ribs against movement in either direction when the umbrella is in open position and to secure the lower rib sections against movement when the umbrella is in closed position.

A further object of my invention is to provide a foldable stick, the construction of which will be brought out more fully herein later.

A further object of my invention is to provide a removable handle so as to shorten the stick when the same is in folded position.

Reference being had to the drawing: Figure 1 is a view of my invention, cover removed, as it will appear when in folded position, the handle thereof being partly removed and partly broken away. Fig. 2 is a skeleton view of my foldable umbrella, the cover removed, as it appears when in open position, the lower rib section being in prolongation with the upper section as is necessary to properly support the cover of the device. Fig. 3 is a partial view of the stick taken centrally. Fig. 4 is a central, vertical, sectional view of the runner of the umbrella and "notch" secured to or formed integral with the upper end thereof. Fig. 5 is a view of the locking means employed between each of the upper and lower rib sections and the braces, to secure the lower rib section against movement in either direction, one of the spring plates being removed in order to disclose said parts. Figs. 6 and 7 are outer and inner views, respectively, of the resilient plates employed in connection with the locking means of each rib. Fig. 8 is a detail of the lower end of the section 4 and upper end of the handle.

Referring more particularly to the drawings, in which like numerals designate like

parts throughout, my invention is described as follows:

The rod 1 is provided with a coupling member 2 between its upper and lower sections 3 and 4. Said coupling member 2 is short, probably not exceeding three-fourths of an inch in length or thereabout. The ends of said coupling member 2 are secured to the respective ends of the upper and lower sections 3 and 4 of the stick 1 by means of pins 5 passing through said ends and the bifurcated portions of the respective ends of the sections 3 and 4, between which the respective ends of the coupling member 2 are interposed. A portion of the lower section 4 is reduced from its bifurcated end downward a short distance, said reduced portion being indicated by the numeral 6. A spring member 7 is provided in a vertical slot in the reduced portion 6 to contact the inner periphery of the tubular member or slidable section 8 when it is slid down over and encircles the joints between the coupling member 2 and the sections 4 and 5 and said member, thus preventing upward movement thereof, thereby conforming the sections of the stick 1 into one continuous non-bendable umbrella stick or staff. The spring member 7, as stated, works in a slot in the reduced portion 6 but its end extends into the neck of the section 4 where it is secured in place by some well known means such as solder.

The handle is held in place to the lower end or foot of the section 4 by means of a ring 9 being received and engaged by a recess or notch 10 cut or provided in said section. The ring 9 is held in engagement with the notch or recess 10 by means of a flat or round metallic spring 11 one end of which is secured to the hollow tubular neck 12 of the handle 13 while the other end is free to play upon the outer periphery of said neck. The tubular neck 12 is provided with two oppositely disposed notches 12' therein at its upper end which are received by respective pins 13' when the handle is secured to the rod 1. Said spring passes under and presses out the ring 9 adapting it thereby to readily engage the notch 10. When the umbrella is in folded position it is not absolutely necessary to remove the handle except in case where the package or receptacle in which the umbrella is contained is not

adapted to receive the umbrella unless said handle has been removed.

Each rib is secured to the notch 14 near the upper end of the stick or staff 1 in the usual manner. The upper rib section 15 is provided with two resilient plates 16 and 17 at its lower end which plates extend substantially in parallel relation to each other. The upper end of the lower rib section 18 is provided with a locking member 19 which coöperates with a locking member 20 provided at the outer end of the corresponding brace 21. The locking members are in that relation to each other when the umbrella is in open position as is illustrated in Fig. 5.

The locking member 20 is provided at its outer end with a slight bend 21, said bend 21 terminating at its end in a right angular corner 22. The locking member 19 is provided at its inner end with a right angular notch or recess 23, which receives and coöperates with the right angular corner 22 of the locking member 20 when the lower rib sections are in extended position as illustrated in Fig. 2.

When it is desired to fold the rib sections the runner 24 is slid downward upon the stick or staff 1 so that the brace 21 causes the locking member 20 to assume the position which is illustrated in Fig. 5 by the dotted lines. The lower rib sections 19 may be then swung backward upon their corresponding upper rib sections and contacting them as illustrated in Fig. 1. The locking members 19 and 20 are pivotally interposed between the spring plates 16 and 17 by means of pins 25 and 26 respectively. The lower extremity of one of the spring plates 17 is bent inwardly forming a tongue 27 for the purpose of contacting and engaging the member 19 to aid in preventing it from moving in either direction when the umbrella is in open position and to prevent its movement in an outward direction when the umbrella is in closed position and it is not desired to swing the lower rib sections back upon the corresponding upper rib sections. The resiliency of the tongue 27 will be sufficient to maintain the lower rib section of each rib in prolongation with its corresponding upper rib section when the umbrella is in closed position as there is no pressure exerted upon the lower rib sections when the umbrella is in such position, attention being called to the fact that when the umbrella is in closed position the locking members 19 and 20 are not in locking relation to one another. The rear ends of the plates 16 and 17 are bent inward so that when they are secured to the lower end of the upper rib section there will be sufficient space between them to accommodate said locking members. A nut and bolt connection of diminutive size extends through each two corresponding plates and

is for the purpose of bringing said plates closer together in the event that the resiliency thereof decreases or they should spring outwardly to such an extent that they will no longer offer the proper tension upon their locking member 19 to prevent the corresponding lower rib section from swinging back upon the corresponding upper rib section. The inner end of each brace 21 is pivotally held to the notch 28 provided at the upper end of the runner 24, the runner 24 is provided with a notch or recess 29 therein near its center, which notch receives an annular ring 30. When the runner is in the position illustrated in Fig. 2 or when the umbrella is in closed position, said ring 30 engages one of the notches 31 provided in the stick or staff 1 at proper points, whereby the said runner 24 is held against upward or downward movement. The ring is held in engagement with its notch in a similar manner in which the ring 9 is held in engagement with the notch 10, that is to say, a flat or round spring 32 passes through the ring and presses the same outward or as illustrated in Fig. 4. One end of the spring 32 is secured to the runner while the opposite end is free to play upon the outer periphery thereof.

Although I have specifically described the construction, combination and arrangement of the several parts of my invention yet I do not confine myself to such specific construction, combination and arrangement but reserve and may exercise the right to make such changes therein as do not depart from the spirit of the invention or the scope of the claim hereunto appended.

Having described my invention, what I claim as new, is:

A foldable umbrella provided with a plurality of ribs, a plurality of corresponding braces and the usual stick, said ribs pivotally held adjacent the upper end of the stick at their upper ends, a runner provided upon the stick, the inner ends of the braces pivoted to the runner, each of said ribs provided with an upper rib section and a lower rib section, a pair of resilient elongated plates secured to the lower end of each upper rib section in parallel relation to each other, each of said plates being bent outward similarly terminating in prongs, one of said plates of each pair provided at its outer end with an inwardly bent tongue, locking members pivotally interposed between each pair of resilient plates, one of which members is secured to the inner end of the lower rib section while the other is secured to the outer end of its respective brace, said locking members coöperating to secure and lock the lower rib sections in alinement with their respective upper rib sections when the umbrella is in open position, said tongue of

one of the said resilient plates of each pair
binding against the adjacent face of the ad-
jacent locking member thereby aiding each
pair of said locking members in preventing
5 the movement of the respective lower rib
section in either direction when the um-
brella is in open position and securing the
lower rib section against outward move-
ment when the umbrella is in closed posi-
10 tion and means to diminish the space be-

tween the plates of each pair of resilient
plates should they become spreaded or lose
their resiliency to a certain extent.

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

STEPHEN McCLELLAN.

Witnesses:

JOSEPH R. McCLELLAN,
FRANK H. ROSE.

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