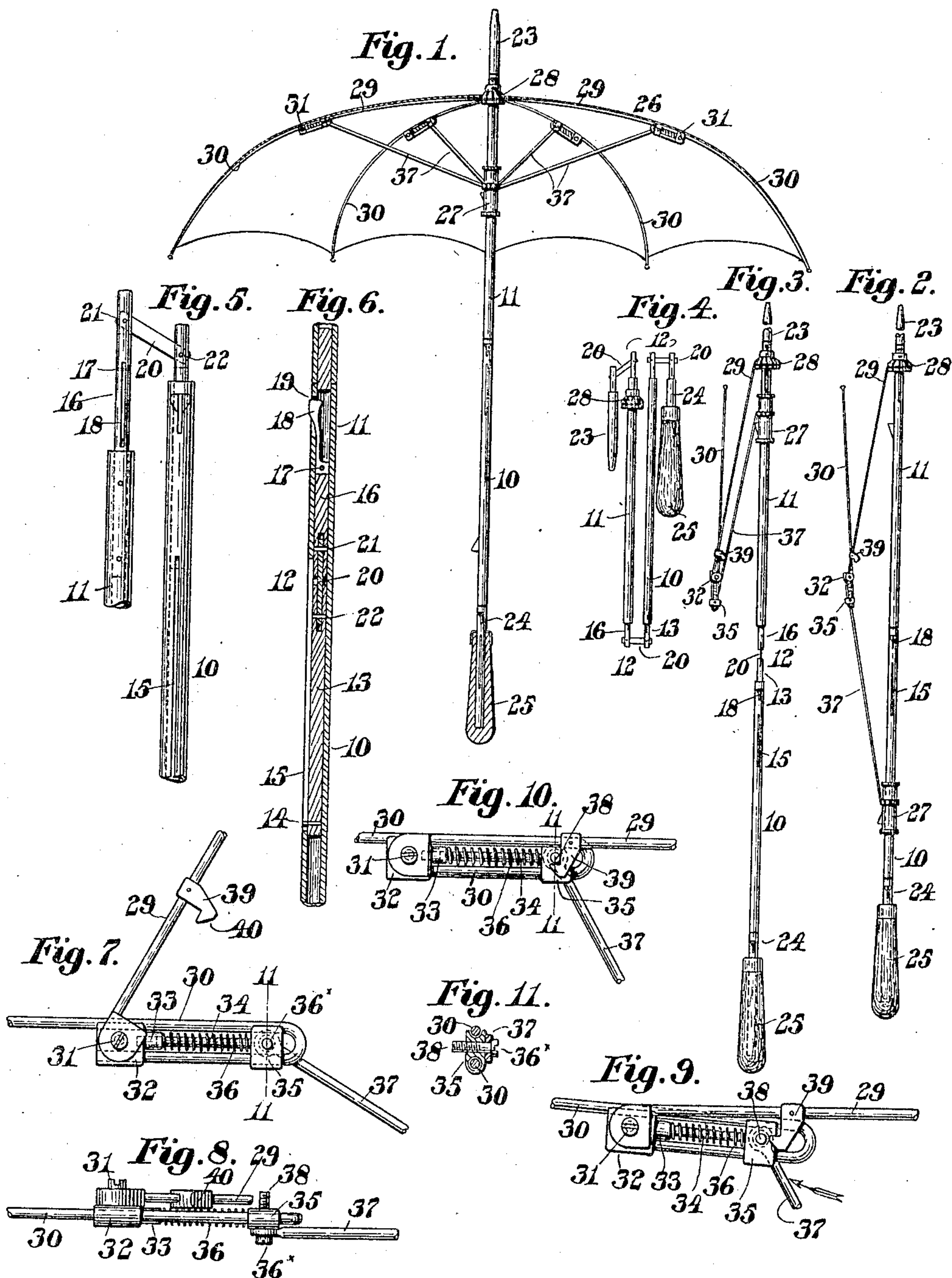


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L. Z. FORGUES.
FOLDING UMBRELLA.
APPLICATION FILED FEB. 8, 1906.



Witnesses:

Howard Hanscom
Edna L. Cleveland

Inventor:

Laurence Z. Forgues,
by Walter C. Lombard,
Atty.

UNITED STATES PATENT OFFICE.

LAURENCE Z. FORGUES, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR OF
ONE-HALF TO ARMAND MIGNAULT, OF SALEM, MASSACHUSETTS.

FOLDING UMBRELLA.

No. 844,584.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed February 8, 1906. Serial No. 300,093.

To all whom it may concern:

Be it known that I, LAURENCE Z. FORGUES, a citizen of the United States of America, and a resident of Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Folding Umbrellas, of which the following is a specification.

This invention relates to folding umbrellas, and is an improvement upon the invention shown and described in Letters Patent No. 579,942, granted to Francois H. Genereux March 30, 1897.

The invention consists in certain novel features of construction and arrangement of parts, which will be readily understood by reference to the description of the drawings and to the claims to be hereinafter given.

Of the drawings, Figure 1 represents a vertical section of an umbrella embodying the features of this invention. Fig. 2 represents an elevation of the stick, handle, one stretcher, and one rib partially folded. Fig. 3 represents a similar view of the same parts with the stretcher and rib in a substantially folded position and with the stick extended ready to make a single fold. Fig. 4 represents a view of the stick and handle extended and folded. Fig. 5 represents an enlarged view of one of the joints in said stick. Fig. 6 represents a section of one of the joints in said stick. Fig. 7 represents a side elevation of the coupling and locking device connecting the two parts of the rib and stretcher, with the two sections of the rib unlocked. Fig. 8 represents an inverted plan of the same parts. Fig. 9 represents a view similar to Fig. 7 with the two portions of the rib nearly in position to lock. Fig. 10 represents an elevation of the same parts with the two portions of the rib locked together, and Fig. 11 represents a section on line 11 11 on Fig. 7.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 and 11 are two sections of the stick, made of metal tubes connected together by a slip-joint 12. This joint consists of a member 13, fitting the interior of the tubular section 10 and provided with a pin 14, projecting into a slot 15 in said section 10, and a second member 16, fitting

the interior of the section 11 and having pivoted at 17 in a slot therein a catch 18, engaging with a slot 19 in said tubular member 11, these two members 13 and 16 being connected together by a link 20, pivoted to said members at 21 22. The tip 23 of the stick is connected to the section 11 in a similar manner, while the handle portion 24 is similarly connected to the section 10 and is provided with a suitable handle 25 to be grasped by the bearer.

When the slip-joint 12 is straightened, as shown in Fig. 3, and the sections 10 and 11 are moved toward each other, so that their ends abut, as shown in Figs. 2 and 6, the stick is made thereby perfectly rigid and capable of supporting the umbrella-top 26. This method of forming a stick insures a very rigid affair of the same diameter throughout, thereby permitting the runner 27 moving freely thereon and nicely fitting the same throughout its length.

Secured by means of a pin to the upper end of the section 11 is the usual top notch 28, to which in the usual manner is secured a plurality of ribs 29, made in two sections, the outer, 30, of which is pivoted at 31 to said inner section 29.

The outer section 30 of the rib 29 is bent back upon itself, as shown in Fig. 10, and is provided with the block 32, interposed between the two parallel portions thereof, this block 32 being provided with the pivot-pin 31, by which two sections 29 30 of the ribs are secured together. The block 32 is provided with a pocket 33, in which the free end of a pin 34 projects, this pin being secured to a slidable block 35, movable upon the parallel portions of the rib 30 to and from the block 32. The pin 34 is surrounded by a spiral spring 36, which tends to keep the blocks 35 and 32 removed from each other.

The block 35 is provided with a pivot-pin 36*, to which is secured the stretcher 37, the inner end of which is connected to the runner 27. The pin 36* extends beyond the face of the block 35, as shown at 38, and is adapted to be engaged by means of the hook 39, secured to the inner section 29 of said rib, when said ribs 29 and 30 will be locked together to form a practically continuous rib, as shown in Fig. 10. The hook 39 is provided with an

inclined face 40, which engages with said pin and causes the block 35 to be moved toward the block 32, depressing the spring in so doing until the hooked portion of said hook 5 39 has passed by the pin 36*, when the spring 36 will act to move the block 35 away from the block 32 and cause the pin 36* to be engaged by said hooked portion and lock the two sections 29 30 of said rib firmly together.

10 The device operates in practically the same manner as that of the device shown and described in the patent hereinbefore mentioned, the features of novelty in this particular application being the jointed stick, which is free 15 from any enlargements, making practically a rigid stick of the same diameter throughout its length, over which a runner may be nicely fitted to run smoothly thereon, while the peculiar construction of the rib-joint is another 20 feature of novelty. This joint of the rib is an improvement over the joint shown in the previous patent, inasmuch as the spiral spring 36 is interposed between two smooth parallel members, which prevents the spring 25 from becoming entangled or otherwise interfering with the umbrella-top 26. The stick itself is a vast improvement over that which has heretofore been in use, as is perfectly obvious.

30 The umbrella in use opens, closes, folds, and unfolds in precisely the same manner as that shown in the patent, and it is believed that without any further description the operation of the invention will be thoroughly 35 understood.

I claim—

1. In a folding umbrella, a rib made in two sections the inner section having its outer end bent upon itself to form two parallel portions, a block rigidly connected thereto and 40 interposed between said parallel portions, a movable block mounted upon said parallel portions and movable toward and from said rigid block, a spring interposed between said parallel portions tending to keep said blocks 45 separated, a stretcher secured to said movable block, a rib-section pivoted to said rigid block, and means for locking said movable block and pivoted section of said rib together.

2. In a folding umbrella, a rib made in two 50 sections the inner section having its outer end bent upon itself to form two parallel portions, a block rigidly connected thereto and interposed between said parallel portions, a movable block mounted upon said parallel 55 portions and movable toward and from said rigid block, a stretcher secured to said movable block, a rib-section pivoted to said rigid block, means for locking said movable block and pivoted section of said rib together, a pin 60 fixedly secured in said movable block and extending into a recess in said fixed block, and a spring surrounding said pin and tending to keep said blocks separated.

Signed by me at Boston, Massachusetts, 65 this 6th day of February, 1906.

LAURENCE Z. FORGUES.

Witnesses:

WALTER E. LOMBARD,
EDNA C. CLEVELAND.