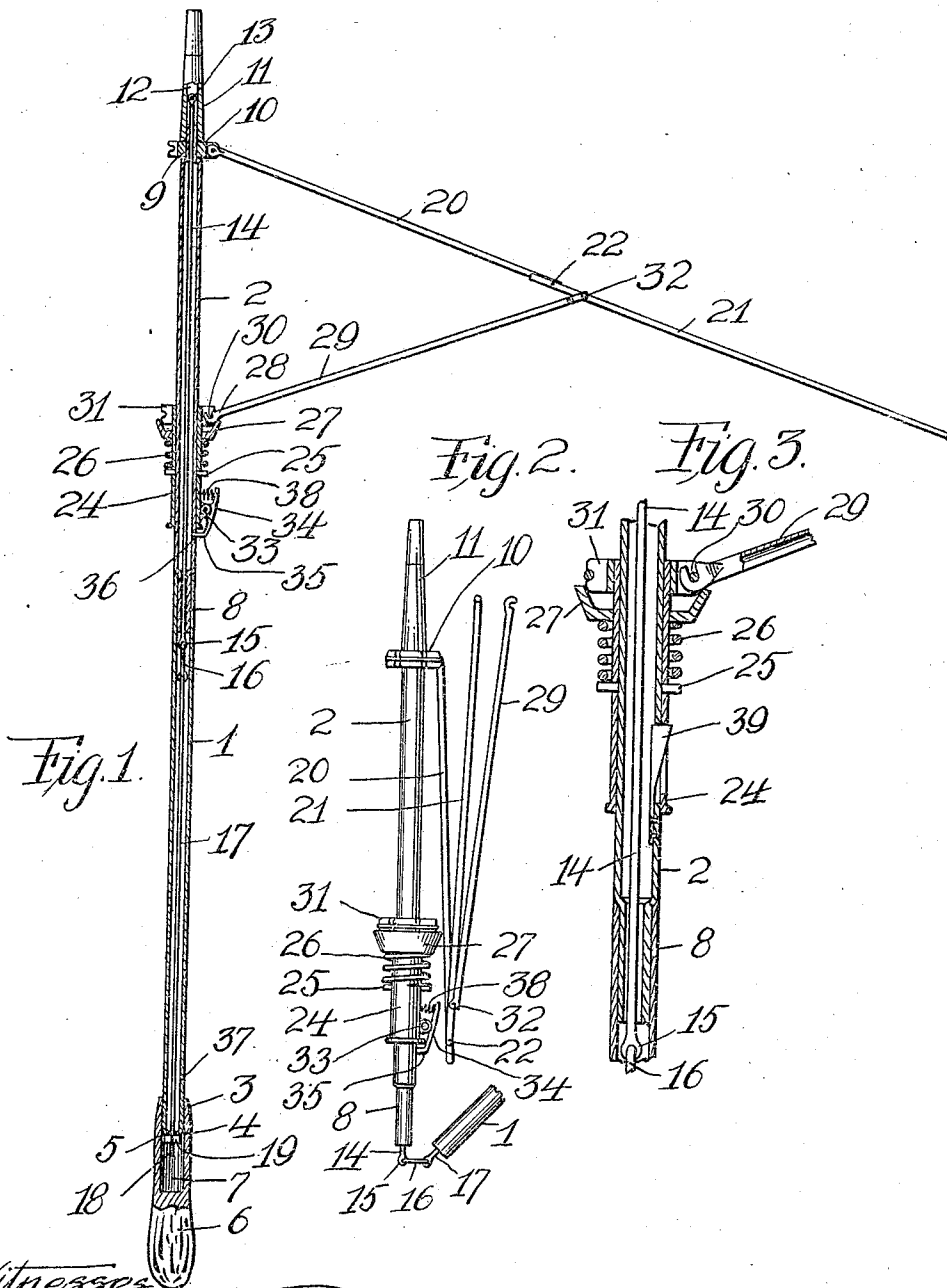


P. PEZZENE.
FOLDING UMBRELLA.
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959,383.

Patented May 24, 1910.



Witnesses.

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UNITED STATES PATENT OFFICE.

PETER PEZZENE, OF CORAOPOLIS, PENNSYLVANIA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER PEZZENE, a citizen of the United States of America, residing at Coraopolis, in the county of Allegheny and State of Pennsylvania, have invented 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 more particularly to that class in which both the stick and ribs are adapted to be reduced in length by telescoping and folding, and commonly designated a folding umbrella.

The paramount objects of my invention are to provide an umbrella that can be readily reduced in its longitudinal dimension so that it can be placed in a comparatively small receptacle, such as a handbag or the pocket of a coat; to afford means for quickly restoring the parts to their extended or open position; and to furnish means for rigidly securing the parts of the umbrella against accidental collapse when expanded.

Other objects of the invention are to provide a simple mechanism for accomplishing the desired results; to so design and construct the parts as to give the requisite strength and rigidity without unusual increase in the weight and dimension, and to supply movable parts having the desirable quality and durability and so related as to be readily assembled and repaired.

Further objects of my invention are to provide simple and effective means for detachably connecting the stretchers to the runner of an umbrella, and to furnish an umbrella of the above type with positive and reliable means for retaining the foldable or telescopic parts of the stick in a rigid position.

I accomplish the above and other important objects by the mechanical construction illustrated in the accompanying drawing, which forms a part of this specification, and in which:—

Figure 1 is a longitudinal sectional view of the stick, showing one rib and stretcher in elevation, the remaining ribs and stretchers being omitted, Fig. 2 is a side elevation of the stick, rib and stretcher thereof folded, the stick being partly broken away, and Fig. 3 is an enlarged vertical sectional view of a portion of the stick and the runner thereof.

An umbrella constructed in accordance

with this invention embodies a tubular, foldable stick having a detachable handle, and foldable ribs having detachable and foldable stretchers, the stretchers being detachable relative to the runner and adapted to support the ribs in an extended position relative to the stick. The stick comprises tubular sections 1 and 2. The lower end of the section 1 is exteriorly screw threaded, as at 3, closed, as at 4 and provided with a small opening 5. Adapted to screw upon the lower end of the stick is a handle 6 having a cylindrical recess 7 formed in the end thereof adapted to receive the lower end of the section 1.

The upper end of the stick 1 is adapted to receive the reduced end 8 of the section 2, and the upper end of the section 2 is reduced, as at 9 to receive a notched collar 10 and a tip 11, the tip being fitted upon the reduced end 9 and provided with a recess 12. Fixed in the recess 12 by a pin 13 is the upper apertured end of a rod 14 adapted to extend through the reduced ends 8 and 9 of the section 2, the end of said rod below the reduced end 8 being enlarged and apertured, as at 15. Pivotally connected to the lower end of the rod 14 is a link 16, and pivotally connected to said link is a rod 17 adapted to extend through the section 1 and the opening 5 in the lower end thereof. The lower end of the rod 17 is threaded, as at 18 to receive a nut 19 employed for retaining the rods 14 and 17 in a rigid position within the sections 1 and 2. The connected rods 14 and 17 serve functionally as a means for retaining the sections 1 and 2 in longitudinal alinement and rigid while the umbrella is extended for use.

Pivotally connected to the notched collar 10 in the usual manner are the ribs, each rib comprising an inner section 20 and an outer section 21. The outer end of the inner section 20 is pivotally connected, as at 22 to the inner end of the outer section 21, and the outer section 21 is channel-shaped in cross section whereby it can be folded upwardly against the inner section. Furthermore, the inner end of the outer section 21 is provided with an opening 23 adapted to provide clearance for the pivoted end of the inner section 20. The cover of the umbrella (not shown) is adapted to be secured to the ribs in the usual manner.

Slidably mounted upon the stick sections 1 and 2 is a runner, comprising a sleeve 24.

This sleeve intermediate the ends thereof is provided with oppositely disposed projecting pins 25 supporting the lower convolution of a coiled spring 26 adapted to encircle the sleeve 24. Resting upon the upper convolution of the spring 26 is a cup-shaped washer 27, and this washer is adapted to retain the hook-shaped ends 28 of stretchers 29 in engagement with pins 30 carried by a notched collar 31 fixed upon the upper end of the sleeve 24. The outer ends of the stretchers 29 are pivotally connected by pins 32 to the outer sections 21 of the ribs. The side of the sleeve 24 adjacent to the lower end thereof is provided with a lug 33 and pivotally connected to said lug is a catch 34 having a pin end 35 adapted to engage in openings 36 and 37 provided therefor in the sections 2 and 1 respectively. A spring 38 is interposed between the catch 34 and the sleeve 24 to normally retain the pin end thereof in engagement with the sections 1 and 2.

To fold the umbrella the cup-shaped washer 27 is lowered and the stretchers 29 detached from the notch 31. The stretchers 29 are then folded downwardly into approximate parallelism with the outer sections of the ribs 21, and then the outer sections and the stretchers are swung upwardly into approximate parallelism with the inner sections 20 of the ribs, as best shown in Fig. 2 of the drawing. The handle 6 is then detached, the nut 19 removed, the section 1 of the stick folded downwardly to provide clearance for the link 16, which permits of the section 1 being swung upwardly in engagement with the ribs of the umbrella. The catch 34 engaging in the opening 36 is adapted to retain the runner in a raised position, either with the ribs of the umbrella extended or folded, and with the catch engaging in the opening 37, the ribs in their extended position will be retained in proximity to the stick and in such position as they generally occupy when an umbrella is closed.

I reserve the right to use an ordinary catch 39 in either of the stick sections for retaining the runner in an adjusted position.

While in the drawing there is illustrated a preferred embodiment of the invention, it is

to be understood that the structural elements thereof can be varied or changed, as to the size, shape and manner of assemblage without departing from the spirit of the appended claims.

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

1. In a folding umbrella, a stick, of a pair of tubular sections, one of said sections having reduced ends, the other of said sections adapted to fit upon one of said ends, a rod extending through that section provided with the reduced ends and further extending into the other of said sections, a tip mounted upon the other of said reduced ends of said section and provided with a recess in which extends one end of said rod, a link connected to the other end of said rod, a rod connected to said link and projecting from the other of said sections having a threaded end, a nut mounted upon the threaded end of said rod adapted when screwed home to retain said rods in a rigid position whereby the said sections are maintained in longitudinal alinement, and a handle detachably connected to one of said sections for inclosing said nut.

2. In a folding umbrella, a stick comprising a tubular section 1 and a tubular section 2, said section 1 having reduced ends, said section 2 adapted to fit upon one of said ends, a rod extending through the section 1 and projecting into the section 2, a tip mounted in the other reduced end of the section 1 and provided with a recess for receiving one end of said rod, means for connecting the said end of the rod to the tip, a link attached to the other end of said rod, a rod 17 connected to said link and projecting from said section 1, means mounted upon the projecting end of the rod 17 for maintaining the rods rigid and for retaining the stick sections in longitudinal alinement, and a handle detachably connected to the section 1 and inclosing said means carried by the rod 17.

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

PETER PEZZENE.

Witnesses:

A. M. DUNLAP,
H. G. WHITE.