

H. J. FINERTY.
 UMBRELLA.
 APPLICATION FILED FEB. 24, 1910.

995,124.

Patented June 13, 1911.

Fig. 1.

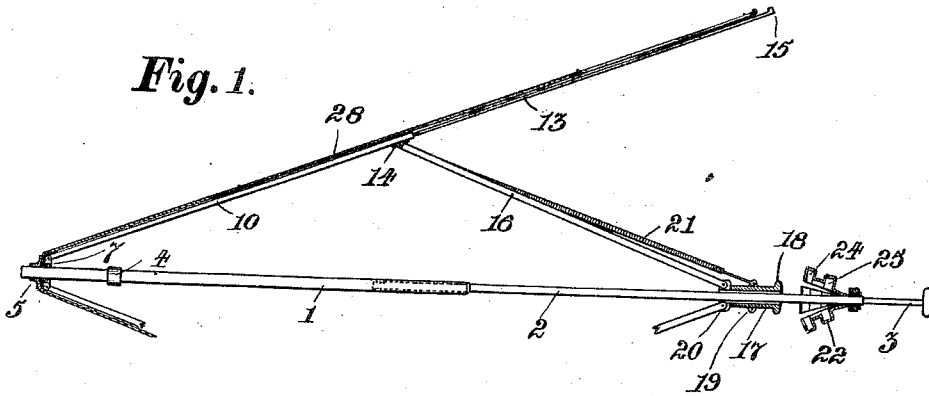


Fig. 2.

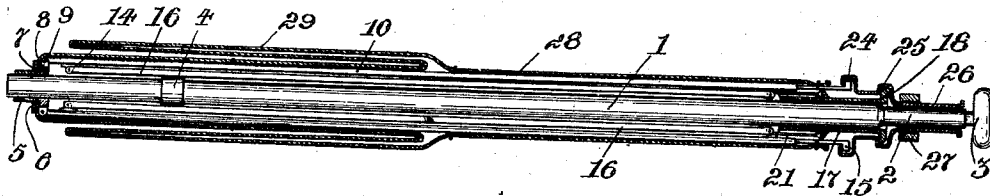


Fig. 3.

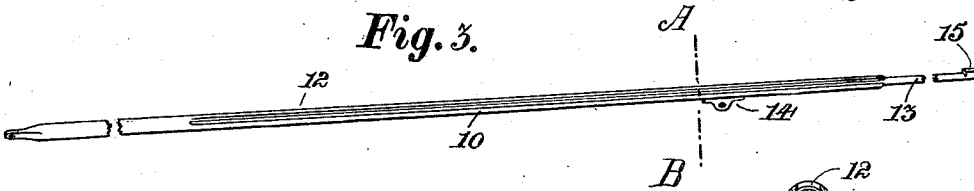


Fig. 5.

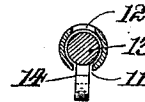
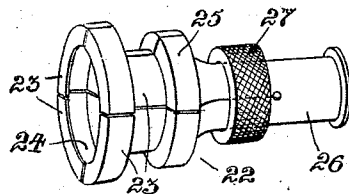


Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

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UMBRELLA.

995,124.

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To all whom it may concern:

Be it known that I, HENRY JOSEPH FINERTY, resident of 70 St. Charles street, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Umbrellas; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in umbrellas, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel arrangement and construction of parts, whereby on the collapsing of the umbrella from its open position, the sections forming the ribs and handle may be slid in to the length of a single section and the cover folded over to accommodate the shorter length.

The objects of the invention are to devise an umbrella which is readily portable for traveling and other purposes so that the said umbrella may be carried in one's pocket or in traveling bag without difficulty, and generally to provide a mechanism in a portable umbrella of simple, cheap and durable construction.

In the drawings, Figure 1 is a side elevation of the umbrella stick in its extended position and one set of ribs and a stay and showing the locking devices in section. Fig. 2 is an enlarged longitudinal sectional view of the umbrella in its closed and folded state. Fig. 3 is an enlarged perspective detail of an inner rib broken away showing the connection of the outer rib thereto and the said outer rib broken away. Fig. 4 is a cross sectional view on the line A—B in Fig. 3. Fig. 5 is an enlarged perspective detail of the catch or lock.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is the main tubular section of the umbrella stick, closed at the outer end and open at the inner end.

2 is the middle section of the umbrella stick also tubular and telescopically arranged within the main section 1.

3 is the handle section of the umbrella stick telescopically arranged within the middle section 2 and preferably of solid construction, though it may be tubular similar to the sections 1 and 2. The telescopic ar-

rangement of the sections 1, 2 and 3 permits the extension of the umbrella stick to the proper length and also allows the housing of the sections 2 and 3 within the section 1 when the umbrella is in its completely collapsed state.

4 is a stop in the form of a ring encircling the main section 1 adjacent to the outer end and fixedly secured thereon.

5 is a sleeve encircling the main section 1 at the outer end thereof and rigid therewith, said sleeve having the outwardly extending flange 6.

7 is a collar encircling the main section 1 immediately inside the flange 6 and having a plurality of radially arranged lugs 8 projecting outwardly therefrom, said lugs having pivot holes 9 therethrough.

10 are the inner sections of the ribs pivotally secured to the lugs 8 in the pivot holes 9 and folding inwardly to the main section 1, each of said ribs being preferably formed part circular in cross section, leaving the longitudinal front opening 11 and having the slot 12 through the back thereof extending inwardly from the outer end and terminating intermediate of the length of the rib.

13 are outer ribs, preferably round rods and sliding within the ribs 10, having the lugs 14 projecting laterally therefrom at the inner end, said lugs extending through the front openings 11 of the ribs 10, said outer ribs 13 also having the lugs 15 at the outer extremity thereof.

16 are stay rods preferably U-shaped in cross section and pivotally secured to the lugs 14 at one end.

17 is a sleeve encircling the middle section 2 and sliding thereon and on the main section 1 and having the annular flange 18 at one end thereof, the annular row of lugs 19 projecting outwardly therefrom intermediate of its length and the annular row of lugs 20 at the other end thereof to which are pivotally secured the inner ends of the said rods 16.

21 are helical springs at one end caught on the lugs 14 and at the other end to the lugs 19 and in constant tension in the folded position of the umbrella, therefore pulling upwardly on the sleeve 17 from all sides and insuring the travel of said sleeve on said sections 1 and 2 up to the stop 4.

22 is a spring catch having the jaws 23 formed with the annular recesses 24 and 25,

said jaws 23 springing outwardly from the barrel portion 26 and held to their closed position by the knurled ring 27, said barrel portion encircling the inner end of the middle section 2. It will be seen that the jaws 23 close over the sleeve and over the outer ribs 13, so that the annular recessed portion 24 of the jaws 23 fits over the circular row of lugs 15 of the outer ribs 13, while the annular recessed portion 25 of the jaws 23 fits over the flange 18 of the sleeve 17, thus securely holding said sleeve in its downward position and said ribs 13 in a snug position close to the umbrella stick.

28 is the cover of any suitable material secured to the outer ribs 13 and to the inner ribs 10 and adapted to have a loose fold 29 to permit of the extension of the said ribs.

In the operation of this invention, presuming the umbrella is closed, as shown in Fig. 2, the sleeve 17 is first drawn out, which pulls the middle section 2 to its open position, at the same time the stay rods 16 are drawn out which in turn slide the outer ribs 13 to their extended position. At the limit of the outward movement of the middle section 2, the ribs 10 and 13 are fully extended and the extension of these ribs takes the fold 29 out of the cover 28, said cover is now in position to be raised. In order to raise the cover, the knurled ring 27 is slid from over the spring jaws 23 and these jaws fly open releasing the outer ribs 13 and the sleeve 17 and as there is a constant pull by the springs 21, the said sleeve slides up over the sections 2 and 1 until it reaches the stop 4. The handle section 3 is then pulled out to the limit of its movement and the umbrella is ready for use. In closing the umbrella, the sleeve 17 is drawn down until the ribs 10 and 13, and the rods 16 are folded to the umbrella stick, the spring catch 22 is closed over the flange 18 and the lugs 15 and the sections 2 and 3 pushed into the section 1, the cover 28 being folded in to the fold 29. The whole umbrella may now, if necessary, be put into a suitable case or carried just as it is without a case, as found most convenient.

The particulars in regard to the telescopic arrangement of the sections are not described at length herein as it is quite common to have sections telescopically arranged in many other devices, therefore, the stops and other holding means in connection therewith are not shown or described. Further, the length of the sections of the umbrella stick and of the ribs, as well as the length of the stay rods in relation to each other are not set forth in this specification and though

preferable shapes of these are mentioned, it must be understood that this has only been done for convenience in description and they may be made in any suitable way, so long as the main features of the invention are adhered to.

What I claim as my invention is:

1. In an umbrella, a telescoping stick, a sleeve sliding on said stick, a slotted fixed ring at the outer end of said stick, inner ribs pivoted in said ring, outer ribs sliding in said inner ribs, stay rods pivotally connecting said sleeve and said outer ribs, means rigidly secured to the outer end of an extensible member of said stick engaging said sleeve and said ribs for drawing them to their outer positions, and resiliently arranged members joining said outer ribs from their inner ends to said sleeve and exerting constant pulls on said outer ribs for retaining them in their outer position during the travel of said sleeve on said stick toward said fixed ring.

2. In an umbrella, a telescoping stick, a sleeve sliding on said stick, a slotted fixed ring at the outer end of said stick, inner ribs pivoted in said ring, outer ribs sliding in said inner ribs, stay rods pivotally connecting said sleeve and said outer ribs, a catch fixedly mounted on the outer end of an extensible member of said stick and engaging the tips of said outer ribs and said sleeve, and spring members secured to the inner ends of said outer ribs and to the sleeve inwardly of said stay rods and retaining said outer ribs in their extended position on the reversal in travel of said sleeve for opening the umbrella.

3. In an umbrella, a telescoping stick, a sleeve sliding on said stick, a slotted fixed ring at the outer end of said stick, inner ribs pivoted in said ring, outer ribs sliding in said inner ribs, stay rods pivotally connecting said sleeve and said outer ribs, a spring catch formed of a closing ring and four outwardly springing jaws suitably formed on their inner sides and engaging the tips of said outer ribs and said sleeve for drawing said outer ribs to their extended position, and means for retaining said outer ribs in their extended position on the reversal in travel of said sleeve for opening the umbrella.

Signed at the city and district of Montreal, Quebec, Canada, this 7th day of February, 1910.

HENRY JOSEPH FINERTY.

Witnesses:

G. H. TRESIDDER,
HARRY DAVIS.