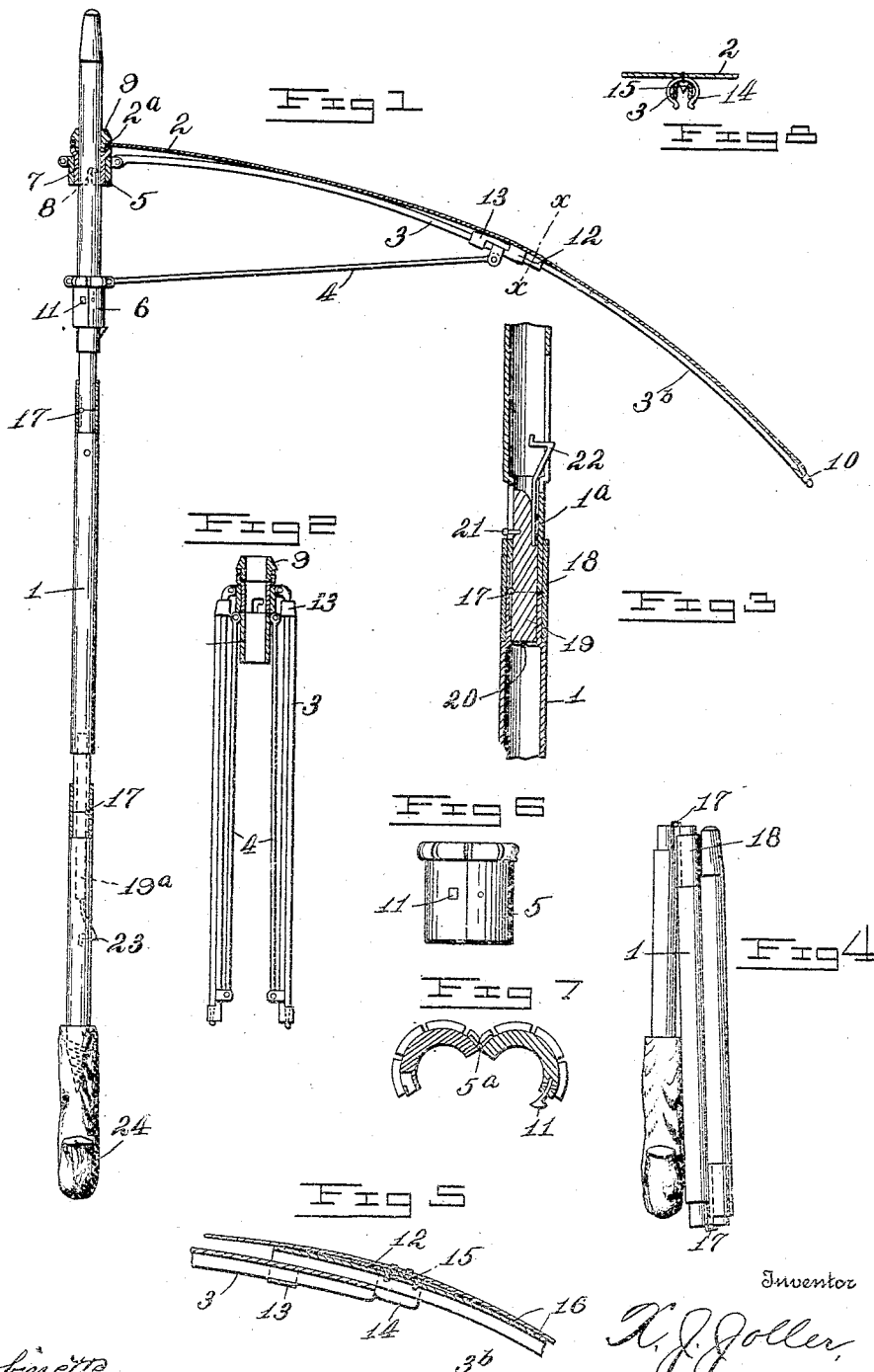


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FOLDING UMBRELLA.
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Patented Nov. 9, 1909.



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UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, XAVIER J. JOLLER, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Folding Umbrellas, of which the following is a specification.

The object of this invention is to provide a simple and advantageous form of umbrella of that type adapted to be collapsed or folded so as to be readily placed in the pocket, valise, or in any comparatively small space.

The invention involves certain features of construction the merit and advantages of which will be more clearly set forth in the following detail description, reference being had in connection therewith to the accompanying drawings, in which—

Figure 1 is a fragmentary view of an umbrella, certain parts being shown in section, the construction embodying the invention; Fig. 2 is a view showing the ribs and stretchers of the umbrella as when in folded position; Fig. 3 is an enlarged section bringing out more clearly the manner or reinforcing the joints of the stick when the sections thereof are in extended positions; Fig. 4 is a view of the stick folded; Fig. 5 is a sectional view showing more clearly the connection between the sections of the ribs and the means carried by the cover for locking the sections in extended positions; Fig. 6 is an elevation of the notch in closed position; Fig. 7 is a horizontal section of the notch in open position; Fig. 8 is a section taken about on the line $x-x$ of Fig. 1.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Referring to the drawings the numeral 1 denotes the stick of the umbrella, the numeral 2 the cover, the numeral 3 the ribs, and the numeral 4 the stretchers. The ribs 3 are pivotally connected at their upper ends with a notch 5, and the stretchers are pivotally connected at their outer ends with the ribs and at the inner ends with the runner 6 on the stick 1.

The cover 2 is detachable so as to readily admit of substituting a cover of different color therefor, or a cover which is of smaller circumference should it be desired to reduce the size of the umbrella, as for summer use. At its center portion the cover 2 will have a reinforced opening 2^a and this opening is

adapted to receive the stick 1. Furthermore to secure the cover 2 to the stick 1 in a detachable manner a sleeve 7 is applied to the upper portion of the stick being interlocked therewith by means of a pin and slot connection shown at 8, and the upper portion of the sleeve 7 is flared outwardly to receive the lower end of a thimble 9 which clamps the center of the cover against the upper end of the sleeve 7 thereby preventing displacement of the cover when thus secured to the stick. At its outer edge portions the cover will be secured to the extremities of the ribs 3 by any suitable fastenings such as hooks 10.

The notch 5 is of peculiar form being comprised of pivoted sections of somewhat semi-circular form, the pivotal connection being denoted at 5^a. The notch is adapted to surround and embrace the lower portion of the sleeve 7 and its sections are held in connected or closed position, as shown in Fig. 6, by a small catch 11. The runner 6 is constructed in a like manner being made, however, of a slightly longer body. It will be seen, therefore, that whenever it is desired to collapse the article it is only necessary to unclasp the catches 11 of the notch 5 and the runner 6, thus separating these parts from the stick and permitting the ribs and stretchers to be folded in the manner shown in Fig. 2.

The ribs 3 are composed of two sections preferably, the upper section pivotally connected with the notch 5, the lower section 3^b having slidable connection with the upper section. For the above purpose the upper rib section has a loop 12 at its lower end receiving the body of the lower rib section, while the lower rib section 3^b has a loop 13 at its upper end receiving the body of the upper rib section. This is a very common form of slidable connection between the parts. In the present instance, however, the sections of the rib 3 are locked in extended positions by locking means carried by the cover 2. This locking means consists of a clasp 14, at least one of which is provided for each rib, said clasp being secured by stitches or other fastening means to a seam in the cover 2. Each clasp 14 of the cover is adapted to spring over an adjacent rib 3 and said clasp is formed with projections or points 15 adapted to engage in openings in the upper portion of the lower rib section 3^b which the clasp engages thereby locking said section from movement relative to the

upper rib section. In other words the cover 2 carries clasps 14 at the seams thereof and these clasps have locking means for positively locking the sections of the ribs 3 in extended position. As shown in Fig. 5 an auxiliary set of openings 16 are provided in the lower rib section 3^b to receive the points 15, in the event the sections 3^b are to be extended a less distance than shown in Fig. 1, to admit of application of a cover of smaller size than that shown in the first figure. In this way the umbrella can be converted into either an ordinary size or a parasol sized article. The stick 1 is made in sections also, the latter being pivoted or hinged as shown at 17. The sections of the stick are preferably hollow and are held in extended position by peculiar means at each joint. This means is shown more clearly in Fig. 3 wherein it will be noted that at the joint 17 the diameter of the stick 1 is reduced as shown at 1^a. On the reduced portion 1^a is a movable sleeve 18 and within the reduced portion 1^a is a slide 19 adapted to rest at its lower end on a cross pin 20. When the slide 19 and sleeve 18 are in the positions shown in Fig. 3 the hinged joint 17 is reinforced and made rigid practically. In order to fold the umbrella, however, the slide 19 is moved upwardly by a finger piece 21 until its lower end clears the break of the joint 17. The sleeve 18 being also moved upwardly, it will be apparent that the joint 17 may be broken and the device folded as shown in Fig. 4. The slide 19 carries the spring catch 22 which coacts with the runner 6 to hold the umbrella open. In like manner the lower slide shown in dotted lines at 19^a in Fig. 1 carries a spring catch 23 for the customary purpose. The handle 24 of the stick 21 may be removable.

Having thus described the invention, what is claimed as new, is:

1. The combination with an umbrella consisting of a stick, ribs, stretchers connected with the ribs, and a cover, of a notch and runner connecting the ribs and stretchers

respectively with the stick, said notch and runners comprising sections adapted to embrace the stick, and means securing said notch and runner to the stick permitting separation of the sections thereof to bodily remove them with the ribs and stretchers.

2. The combination with an umbrella consisting of a stick, a cover, ribs and stretchers connected with the stick, and stretchers connected with the ribs, of a notch and runner mounted on the stick and respectively connecting the ribs and stretchers thereto, said notch and runner each comprising sections hinged at one edge, and catches connecting the other edges of the sections and permitting pivotal opening movement of the same to bodily remove them from the stick with the ribs and stretchers.

3. In a folding umbrella, the combination of a stick, a cover, said stick being comprised of hollow sections, means connecting the sections together, and reinforcing means for said connection consisting of a slide movable in the hollow sections to a position breaking joint with the joined portions, a sleeve surrounding and slidable on the sections at the joined portions, and means for holding the slide and sleeve in said positions.

4. In a folding umbrella, the combination of a stick, a cover, said stick being comprised of sections, means connecting the sections together, and reinforcing means for said connection consisting of a slide movable in the sections at the joined portions, a sleeve surrounding the sections at the joined portions, a runner mounted on the stick, stretchers connected with the runner for raising the cover, and a spring catch mounted on the slide at the joint aforesaid for coöperation with the runner.

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

XAVIER J. JOLLER.

Witnesses:

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