No. 849,407. PATENTED APR. 9, 1907.

H. C. LOWRIE.

UMBRELLA.

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Fig. 1.

Fig. 5.

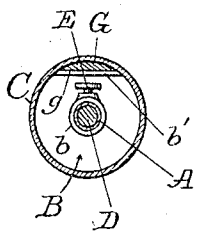


Fig. 2.

Fig. 3.

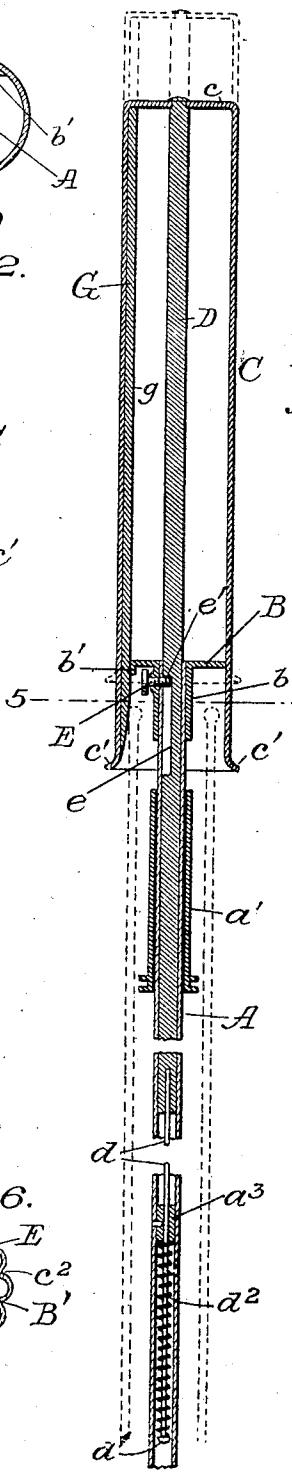


Fig. 4.

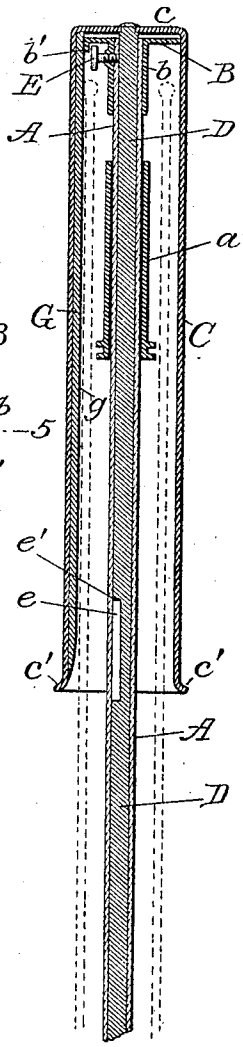


Fig. 7.

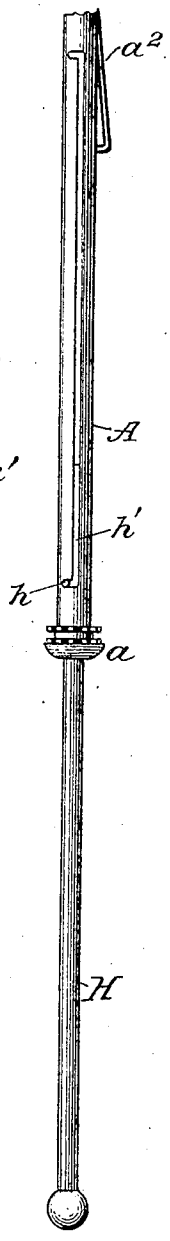
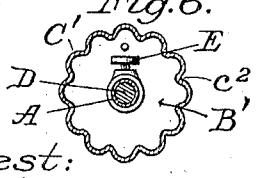


Fig. 6.



Attest:

E. F. Chadwell.

Parker & Sweet Jr.

Inventor:

Harvey C. Lowrie,

By Howell & Battle

Attorney.

UNITED STATES PATENT OFFICE.

HARVEY C. LOWRIE, OF NEW YORK, N. Y.

UMBRELLA.

No. 849,407. Specification of Letters Patent. Patented April 9, 1907.

Application filed February 6, 1906. Serial No. 299,734.

To all whom it may concern:

Be it known that I, HARVEY C. LOWRIE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

My invention relates to improvements in umbrellas which are capable of being shortened in order that they may be packed in a dress-suit case or traveling-bag or more conveniently carried in the hand when not in use.

Briefly stated, my invention consists in providing an umbrella with a slidable hollow handle which is moved inwardly over the ribs and cover of the umbrella for shortening its length and for housing and protecting the cover, so that the umbrella may be handled and carried by the handle when in its shortened condition, as well as when lengthened for ordinary use.

After a detail description of my invention the features deemed novel will be specified in the claims hereunto annexed.

Referring to the drawings furnished and forming a part of this specification, Figure 1 illustrates an umbrella embodying my invention and as it appears when lengthened for ordinary use. Fig. 2 illustrates the same when shortened for packing purposes or for more conveniently carrying it in the hand. Fig. 3 is a central longitudinal section of the handle and a portion of the stick of the umbrella, the handle being shown in its projected position or in the position it occupies when the umbrella is lengthened for use. Fig. 4 is a similar sectional view illustrating the handle as when pushed inwardly over the ribs and cover of the umbrella for shortening its length. Fig. 5 is a cross-sectional view taken on line 5 5 of Fig. 3. Fig. 6 is a view corresponding to Fig. 5, but illustrating a handle of slightly-modified form. Fig. 7 illustrates the "tip" end of the umbrella with the tip in its projected or extended position.

Referring more particularly to Figs. 3, 4, and 7, A indicates a tubular umbrella-stick carrying a crown *a* at its lower end, Fig. 7, to which the umbrella-ribs are pivoted in the usual manner, and having a collar or disk B at its opposite end, which fits the interior of the hollow handle C and forms a bearing therefor. The rib-stretchers of the umbrella are secured to a runner *a'*, slidably mounted upon the stick A, and the latter is provided with a spring-catch a^2 to engage the runner for holding the umbrella in its open position, these parts being the same as in umbrellas of common construction. The hollow handle C has an interior diameter sufficient to permit it to receive and house the ribs and cover of the umbrella when moved inwardly for shortening the length of the umbrella; but it need not necessarily be round or circular in cross-section, as illustrated in Figs. 1 to 5, inclusive, but may be longitudinally fluted, as illustrated in Fig. 6, or otherwise ornamented as may be desired.

Mounted centrally within the handle C is a rod D, which is riveted or otherwise secured to the closed end *c* of the handle and which is slidably mounted in the umbrella-stick A, said rod projecting from the open end of the handle into the tubular stick A a sufficient distance to afford necessary strength and rigidity between the stick and handle when the latter is in its extended position. (Illustrated in Figs. 1 and 3.) The collar B, which is secured to the end of the umbrella-stick A, is made to fit the interior of the handle C and hold it against lateral movement and also guide it over the ribs and cover of the umbrella, and in order that the handle may be moved inwardly without injury to the umbrella-cover its inner open end is slightly flared, as illustrated at *c'* in Figs. 3 and 4.

The end of the rod D which is within the stick A is provided with a thin stem *d*, which is somewhat longer than the length of movement of the handle C. Said stem *d* projects through a perforated plug or stop a^3, rigidly secured in the stick A, and beyond said stop said stem is provided with a head or collar *d'*.

Mounted on the stem *d* between the head or collar *d'* and the stop a^3 is a spiral spring d^2, which has a tendency to draw the rod D and handle C inwardly when said handle is in its extended position. Said handle is held in its outward or extended position by means of a screw E, which is mounted in the hub *b* of the collar B. Said screw projects through the stick into a slot *e* in the rod D, and by engaging the end wall *e'* of the slot it serves to hold the rod D against inward movement. The slot *e* is, however, made long enough to permit the handle to be moved outwardly a slight distance from its normal position against the action of the spring d^2. (Indicated in dotted lines in Fig. 3.) The inner open end of the handle is thus made to serve the purpose of a tip-cup for holding the umbrella-

ribs, it being only necessary to pull the handle outwardly for inserting and removing the rib-tips, the spring d^2 serving to return it and hold it in its normal position.

When it is desired to shorten the umbrella, the screw E is turned for removing it from the slot *e*. The umbrella being closed and the cover rolled in the usual manner, the handle C is pushed inwardly over the ribs and cover, as illustrated in Fig. 2, the cover being thereby housed and protected, so that the umbrella may be grasped and carried without injury to the cover and without liability of the latter becoming loose or unrolled.

For preventing the screw E from being entirely removed from the hub *b* of the collar B the latter is turned down, as at *b'*, to form a stop, which permits the screw to be moved outwardly sufficiently to release it from the slot *e*.

It is desirable that the handle C be held against rotation, and this may be provided for in a variety of ways. In Figs. 3, 4, and 5 the interior of the handle is provided with a flat surface *g*, formed by a strip of metal G, soldered or otherwise secured to the handle, said strip of metal being made to fit the space between the collar *b* and the wall of the handle, which is afforded by turning down a portion of the collar B to form the screw-stop *b'*.

In Fig. 6 I show a handle C', which is longitudinally fluted, as at c^2, the interior ribs formed by the flutes engaging with a correspondingly-shaped collar B'. In this form of handle the flutes serve to ornament the handle and also to hold it against rotation on the collar B'.

As illustrated in Figs. 2 and 7, the umbrella is shortened at its tip end by sliding the tip H in the tubular umbrella-stick A. This forms no part of my invention, and any desired means may be employed for holding the tip in its extended or retracted position. As illustrated in Fig. 7, the tip H is held in the stick A by means of a pin *h*, secured to the tip near its inner end and which travels in a slot *h'* in the stick A. Said slot is provided with lateral recesses at its ends, which, with the pin *h*, form what is known as a "bayonet-joint." By turning the tip H to bring the pin in line with the slot *h'* it may be moved inward or outward and will be held in either position by causing the pin to enter one of the lateral recesses, as will be readily understood.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An umbrella having a hollow handle slidably connected to the umbrella-stick, said handle in its normally extended position having its open inner end adjacent to the tips of the umbrella-ribs when the latter are in closed position, and being adapted to slide over the ribs and cover of the umbrella for shortening its length and housing and protecting the cover.

2. An umbrella having a hollow handle slidably connected to the umbrella-stick, said handle having a flared inner end which in the normally extended position of the handle is adjacent to the tips of the umbrella-ribs when the latter are in closed position, said handle being adapted to slide over the ribs and cover of the umbrella for shortening its length and housing and protecting the cover.

3. The combination with an umbrella-stick of a hollow handle slidably connected thereto, said handle being adapted to slide over the ribs and cover of the umbrella to shorten its length, and a spring controlling the limit of the normal outward movement of the handle.

4. The combination with an umbrella-stick of a hollow handle slidably connected thereto, said handle being adapted to slide over and house the ribs and cover of the umbrella, means for locking the handle against inward movement while permitting it to have a limited movement outwardly from its normal extended position.

5. The combination with a tubular umbrella-stick of a hollow handle having a rod centrally mounted therein, said rod being slidably mounted within said stick and a collar on the end of the stick affording a bearing for said handle.

6. The combination with a tubular umbrella-stick, of a hollow handle having a rod centrally mounted therein said rod being slidably mounted in said tubular stick and having a head or projection thereon, a stop within said stick, and a spring interposed between said head or projection and said stop.

7. The combination with a tubular umbrella-stick of a hollow handle having a rod centrally mounted therein, said rod being slidably mounted in said tubular stick and being provided with a head or projection, a stop in said stick, a spring interposed between said stop and said head or projection, and a screw projecting from said stick into a slot or recess formed in said rod, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARVEY C. LOWRIE.

Witnesses:
V. BIGELOW,
BRECKENRIDGE CARROLL.