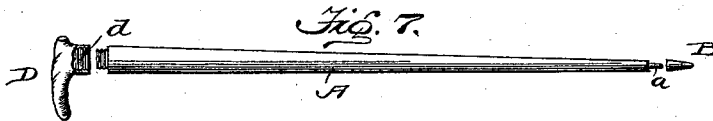
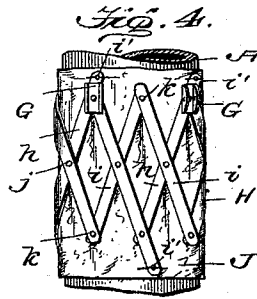
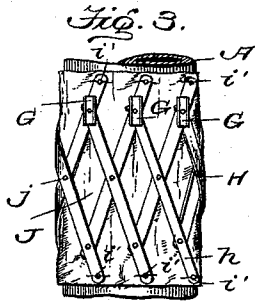
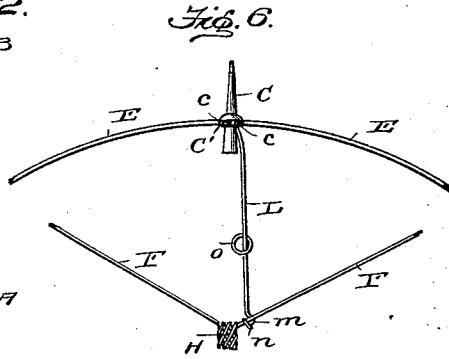
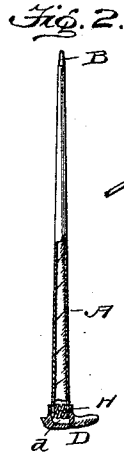
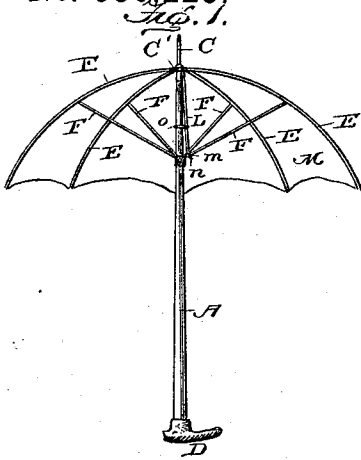


(No Model.)

C. H. MORGAN.
COMBINED CANE AND UMBRELLA.

No. 536,223.

Patented Mar. 26, 1895.



Witnesses:

Wm B Ashlee
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UNITED STATES PATENT OFFICE.

CHARLES HENRY MORGAN, OF WEST CHESTER, PENNSYLVANIA.

COMBINED CANE AND UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 536,223, dated March 26, 1895.

Application filed December 8, 1893. Serial No. 493,107. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY MORGAN, a citizen of the United States, residing at West Chester, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Cane and Umbrella; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in combined canes and umbrellas of that class which employ a foldable frame adapted to be inclosed or housed within a tubular staff; and the objects in view are to provide a simple, strong and durable structure adapted to collapse compactly together so as to be wholly inclosed within a tubular staff and used as a walking stick, or said device can be withdrawn from the staff and attached thereto to serve as an umbrella.

One part of my present improvement relates to the runner which is constructed on the principle of the lazy-tongs and consists of a series of links pivoted together in a peculiar manner to enable a soft lining to be used in connection with the lazy-tongs runner. This lining, which may be composed of a piece of leather, fabric or other pliable material, serves to limit the distension of the runner and to protect the tubular staff from being scratched or defaced when the runner is moved up or down on the staff. The runner consists of alternate long and short links, and these short links are pivoted to the long links a short distance from the ends of said long links; and in the projecting ends of these long links are provided suitable eyes or apertures through which can be passed the stitches or other means for uniting the pliable lining to the pivoted links of the runner. To accommodate the stretchers of the umbrella-frame, I provide the runner with a series of brackets which correspond in number to the number of stretchers employed; and these brackets are pivoted to the links at the same points and by the same pivots which connect the long and short links together, whereby the fastenings which unite the pliable lining to the runner do not interfere with the free play

or working of the links on the pivots which join the links of the runner and which enables the runner to expand or contract very freely.

Another improvement which I have made consists in the retainer by which the stretchers and ribs are held in their distended positions when the umbrella-frame is opened for use. This retainer consists of a strip of spring metal which is attached at its upper end to the extension spindle of the umbrella and the lower end of this spring-retainer is formed with a loop which is arranged to be engaged with one of the stretchers of the umbrella-frame instead of being connected with or engaged to the sliding runner as is usual in umbrellas. To this spring retainer is secured a guide loop or ring through which the tubular staff of the umbrella or cane is passed and this ring serves to prevent displacement of the spring-retainer when it is engaged with one of the stretchers, whereby the umbrella-frame is not liable to collapse owing to accidental disengagement of the retainer from the umbrella frame.

In my improved folding umbrella-frame having the collapsible runner forming a part thereof, I construct the stretchers somewhat longer than the stretchers of ordinary folding umbrellas in order that the runner will be extended or projected, when the frame is folded, beyond the ends of the ribs. By this construction, I am able to more compactly fold the umbrella-frame because the ribs and stretchers will not be interfered with by the runner; and when the umbrella frame is inserted into the tubular staff, this runner protrudes beyond the larger end of said staff.

To completely inclose the umbrella-frame and its runner within the tubular staff, I provide a handle which has a chamber formed therein to receive the runner, and this handle-chamber is provided with screw threads which are engaged with similar threads on the larger end of the tubular staff.

The invention further consists in the peculiar construction and arrangement of parts which will be hereinafter more fully described and pointed out in the claims.

To enable others to more readily understand my invention, I have illustrated the pre-

ferred embodiment thereof in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view showing my device adjusted for use as an umbrella in which the collapsible frame is distended and attached to the tubular staff. Fig. 2 is a view of the device in which the umbrella-frame is folded and housed within the tubular-staff, thus adapting the device for service as a walking stick. Fig. 3 is a view of my runner constructed to provide two links to each of the stretchers, and Fig. 4 is a like view of the runner in which four links are provided to each of the stretchers. Fig. 5 is an enlarged detail view showing the manner of pivoting the long and short links and the bracket which forms the means for attaching the inner end of the stretcher to the runner. Fig. 6 is an enlarged detail view of the spring retainer, and Fig. 7 is a detail view of the staff showing the removable ferrule for use in connection therewith as a walking stick.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A denotes the tubular staff which may be made of metal or any other suitable material. I prefer to make this tubular staff of aluminium and to apply a finish of hardwood veneering, or other material, to the outside thereof, in order to produce a light device which will have the necessary rigidity and durability; but it is obvious that the staff can be made and finished of other materials than those herein referred to. Hence I do not limit myself to these materials. This tubular staff is tapered throughout its length, and at its small end it is provided with a tenon, *a*, which is exteriorly screw-threaded, to enable the ferrule B to be screwed thereon when the staff is to be used as a walking stick, or this ferrule can be detached, and an extension tip, C, screwed on the threaded tenon, *a*, when the umbrella frame is to be attached to the tubular staff to convert the device into an umbrella. The larger end of this staff, A, is exteriorly screw-threaded, and on this end of the staff is screwed a detachable handle, D. This handle has one end made with a socket, *d*, which is of such diameter as to receive within itself the lazy-tongs runner when the umbrella-frame is collapsed and thrust within the tubular staff, and this socket or chamber, *d*, is exteriorly screwthreaded to enable the same to be screwed upon the larger threaded end of the tubular staff.

The extension tip, C, of my umbrella is formed with a crown piece, C', which is preferably integral with the extension tip; and this crown piece is made with radial seats, *c*, in which are fitted the inner ends of the ribs, E, which are of the usual construction. This crown piece, C', is also provided with an annular groove in which is fitted the usual ring on which are pivoted the ribs, E, in the usual manner. This extension tip, C, is made with

a threaded socket at its inner end, which is adapted to be screwed upon the threaded tenon, *a*, of the staff, A, whereby the tip can be readily detached from or attached to the end of the tubular staff.

The stretchers, F, of my umbrella-frame are of the usual or any preferred construction, and said stretchers are pivoted to the ribs at points intermediate of the length of said ribs while the inner ends of the stretchers are pivoted to the brackets, G, of the runner H. This runner is of peculiar construction as indicated by Figs. 3, 4 and 5 of the drawings. The runner is made of links which are pivoted together to enable them to be expanded when the umbrella frame is to be attached to the handle or staff, A, and to be folded compactly within a small space when the umbrella-frame is to be housed or inclosed within said tubular staff. The runner consists of the long links, *h*, and the short links, *i*, and these links are arranged to cross each other, said links being pivoted near their middle, as at *j*, and the short links being pivoted to the long links near the ends of the latter, as at *k*, thus leaving a certain part of the long links extending beyond the ends of the short links, as indicated in Figs. 3 and 4. Within the runner formed by these pivoted links is arranged a pliable sheath or thimble, J, which is composed of leather, fabric or other suitable material of a pliable nature, and this sheath or thimble is attached to the protruding ends of the long links by means of stitches, or other suitable fastenings, which are passed through eyes or apertures, *i'*, formed in the protruding ends of the long links. The sheath or lining is thus attached to the runner in a manner to enable the latter to expand or contract without interference from the attaching means, and this pliable lining or sheath thus serves a two-fold purpose, *i. e.*, to limit the expansion of the runner and to protect the tubular staff from the runner so that the staff will not be scratched or defaced.

The runner may consist of any suitable number of links connected together in the manner shown and described, and in Fig. 3 I have shown two links to each stretcher, but in Fig. 4 the runner consists of four links to each stretcher, although the number of links is not material. In the construction of the runner shown by Fig. 3, a bracket G is provided on each of the long links, *h*, but in Fig. 4 a bracket, G, is provided for each alternate long link. The brackets, G, to which the stretchers are pivoted, are connected to the long links by means of the same pivots which connect the long and short links together, thus simplifying the construction and giving the lazy-tongs runner the necessary play when the umbrella-frame is opened or closed.

In the practical construction of my umbrella, I make the stretchers somewhat longer than the stretchers of the ordinary umbrella-frame, and thus when the frame is collapsed

the ends of the stretchers are about even or project beyond the ends of the ribs, so that the runner will be caused to extend beyond the ribs, whereby the frame can be more compactly folded as the runner does not interfere in any way with the ribs and stretchers folding close together.

The means which I employ for holding the umbrella-frame in its opened or distended position consists of the spring-retainer, L, which is in the form of an elastic strip or plate having its lower end formed with the loop, *m*, and with the inclined free extremity, *n*, forming a nib by which the spring retainer can be manipulated by hand. The upper end of this spring retainer is fastened, in a manner similar to the ribs, to the crown-piece, *C'*, within the cover, so that it does not pass through the latter, and it extends close alongside of the extension tip and the upper end of the staff, A, so that the loop, *m*, thereof is in position to engage with one of the stretchers of the umbrella-frame instead of being engaged with the runner, as is usual in umbrellas of the ordinary type. This spring retainer is provided with a ring or band, *o*, which is attached thereto at an intermediate point of the length of the retainer; and this ring or band encompasses the staff, A, so as to prevent the retainer from being accidentally disengaged from the stretcher, but as this ring is of greater diameter than the part of the staff around which it fits, the ring or band has a limited play or movement on said staff to enable the retainer to be engaged with or disengaged from the stretcher according as it is desired to lock the umbrella-frame in its open position or to enable the frame to be folded or collapsed.

The cover, M, of my umbrella may be of any suitable material and it is attached permanently to the ribs and the crown piece in any suitable way.

This being the construction of my combined cane and umbrella, the operation may be described as follows: To use the device as an umbrella, the connected ribs, stretchers, extension-tip, runner, and cover are withdrawn from the tubular staff after the handle, D, has been detached from the larger end of said staff. The staff is now thrust through the runner and the band or ring on the spring retainer, and the socketed end of the extension-tip is screwed into the tenon, *a*, of the staff, and the handle D is screwed upon the threaded larger end of the staff. The device is now ready for use as an umbrella, and the runner can be moved toward the outer end of the staff to unfold the ribs and stretchers, the frame being locked in its open position by the loop, *m*, of the spring retainer engaging with one of the stretchers of said umbrella-frame. It is to be understood, that the ferrule, B, is detached from the tenon, *a*, of the staff before

the staff is thrust through the runner and the ring or band of the spring retainer.

To fold the umbrella frame and enable the device to be used as a walking stick, the staff is unscrewed from the extension tip, C, the stretchers and ribs are folded compactly together to project the runner beyond the stretchers and ribs, the handle is unscrewed, and the whole umbrella frame comprising the extension tip, stretchers, ribs, runner, and cover are thrust or inserted into the staff, with the collapsed runner extending somewhat beyond the larger end of said staff, after which the ferrule is screwed on the tenon, *a*, and the handle is screwed on the larger end of the staff so as to receive within its socket the projected part of the runner.

I am aware that changes in the form and proportion of parts, and in the details of construction, of the mechanism herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such modifications and alterations as fairly fall within the scope of the invention.

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

1. In a combined cane and umbrella, the combination with a staff, an expansible runner, the ribs, and the stretchers, of a tip detachably connected to the staff and having the crown piece to which the ribs are pivoted, and a pendent arm L fastened at its upper end to the crown piece and provided with the band or loop which is fitted around the staff and lies in the path of the slidable runner thereon, as and for the purposes described.

2. In a combined cane and umbrella, the combination with a staff, and a collapsible umbrella frame having the tip, ribs, and stretchers, of the collapsible runner consisting of the pliable lining and the crossed pivoted links arranged outside of or around said pliable lining, the ends of said crossed links being prolonged beyond the pivots which connect them together and being attached to the pliable lining, substantially as and for the purposes described.

3. In a combined cane and umbrella, the expansible runner consisting of the pliable lining, the crossed links pivoted together around the pliable lining and having the ends thereof prolonged or extended beyond the pivots thereof and attached to the pliable lining, in combination with a staff upon which the pliable lining of the runner is adapted to slide, the ribs, and the stretchers having their ends attached to the links of the runner within the points of attachment of the links to the pliable lining, substantially as and for the purposes described.

4. In a combined cane and umbrella, the

expansible runner consisting of the long links, the short links pivoted at their ends at points within the terminals of the long links, the pliable lining within the links forming the metallic body of the runner and attached to the long links beyond the points where the short links are pivoted thereto, and the brackets G carried by the links within the point of attachment to the lining, in combination

with a staff, the ribs, and the stretchers pivoted to the brackets G, substantially as and for the purposes described.

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

CHARLES HENRY MORGAN.

Witnesses:

W. H. THOMSON,

JOHN A. RUPERT.