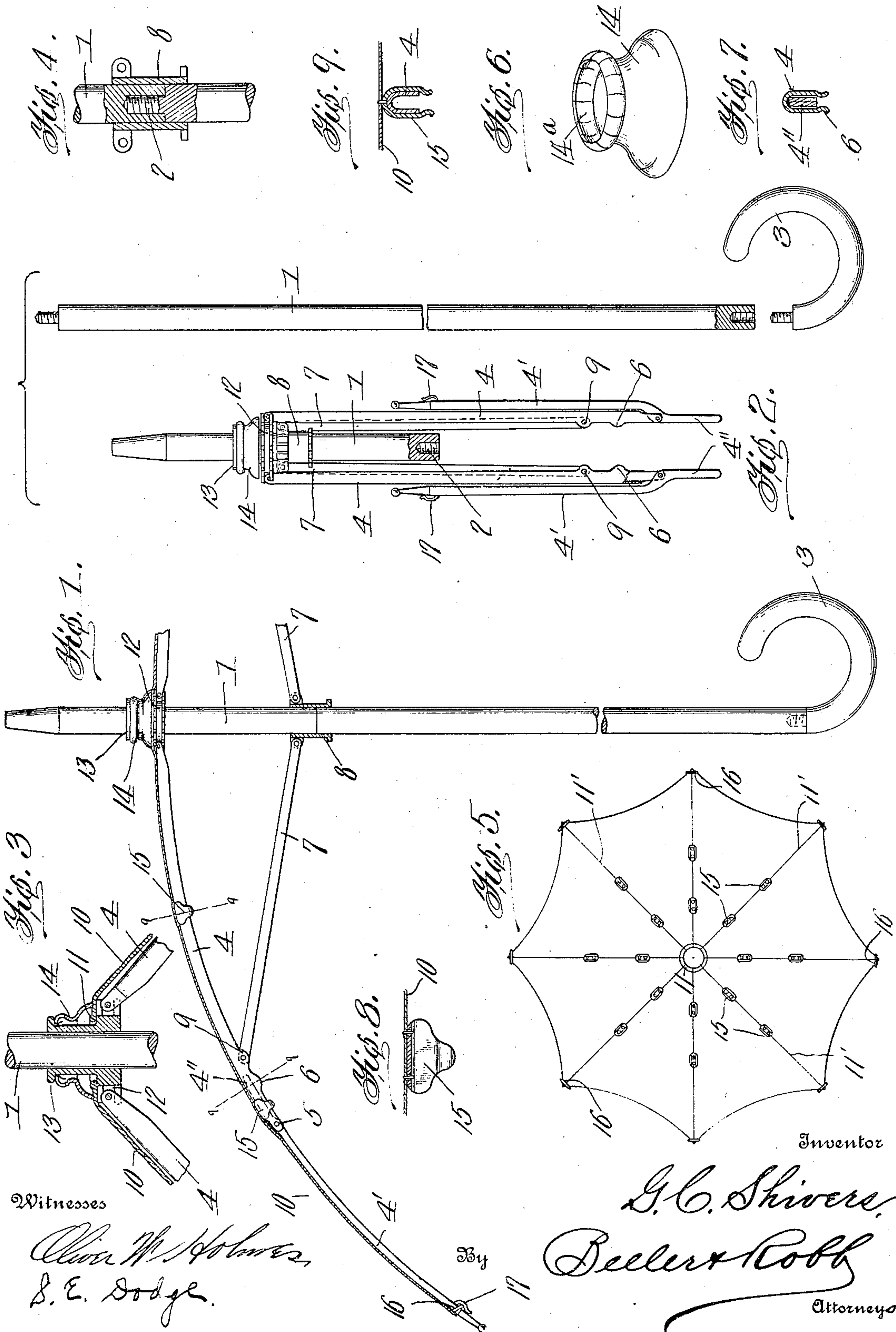


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G. C. SHIVERS.
FOLDING UMBRELLA.

APPLICATION FILED MAR. 7, 1908.



Witnesses

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GEORGE C. SHIVERS, OF SAVANNAH, GEORGIA.

FOLDING UMBRELLA.

No. 886,426.

Specification of Letters Patent.

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Application filed March 7, 1908. Serial No. 420,074.

To all whom it may concern:

Be it known that I, GEORGE C. SHIVERS, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, 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 novelform of umbrella of the collapsible type.

Various folding or collapsible umbrellas have been heretofore devised, but so far as I am aware, they have never been brought into commercial use, mainly because of the complicated and otherwise undesirable constructions employed in the practical embodiment thereof.

The essential desiderata in order to provide a commercial and practical article of the class to which my invention relates, are, first, simplicity of structure; secondly, frame construction such as will admit of quickly reducing the umbrella to its collapsed form with all parts folded together in a small compass of space; thirdly, at least as great a degree of substantiality as is possessed by the commonly used non-collapsible umbrella; and lastly, a structure which will give the same graceful effect as the ordinary umbrella, in so far as appearance is concerned, and at the same time be light and serviceable for all purposes.

In carrying out the present invention the above important and necessary features of construction have been borne in mind, and a device, combining the various structural prerequisites, has been produced, which fully answers all commercial purposes.

Among other objects of the invention, it is contemplated to provide an umbrella, the cover of which is removable or detachable, to enable the owner to readily substitute a cover of different color from that already applied to the device, whereby with a single umbrella frame, many different colored covers may be used interchangeably to suit the whim or desire of the owner. The advantages of the above are evident without recitation.

For a full understanding of the invention and the advantages and mode of operation thereof, reference is to be had to the following detail description and to the accompanying drawings, in which:

Figure 1 is a vertical sectional view, par-

tially broken away, showing a collapsible umbrella embodying the essential features of the invention; Fig. 2 is a side elevation, certain parts being broken away to show connections in section, and the umbrella parts being arranged in collapsed positions; Fig. 3 is a detail sectional view bringing out more clearly the detachable cap cooperating with the umbrella cover; Fig. 4 is a detail view, partly in section, bringing out the jointed construction of the stick and the cooperation of the runner therewith; Fig. 5 is a bottom plan view of the cover; Fig. 6 is a detail view of the cap; Fig. 7 is a section on the line 7—7 of Fig. 1; Fig. 8 is a detail section of one of the clasps attached to the cover, and Fig. 9 is a detail section on the line 9—9 of Fig. 1.

Similar reference characters refer to similar parts throughout the following detail description and on the several views of the drawing.

Specifically describing the invention the numeral 1 designates the stick of the umbrella, the same being made in sections preferably connected by a screw joint 2, a detachable handle 3 being applied to the lower end of the stick. The umbrella is provided with the usual ribs for supporting the cover, said ribs being, however, of peculiarly advantageous form. Each rib consists of an upper section 4 and a lower section 4', the sections being connected together by means of a pivot 5. When in operative position the sections 4 and 4' of each rib are in alignment and form a continuous member, being held in such position by means of an end extension 4'' with which each rib section 4' is provided at its upper end. The end extension 4'' of the rib section 4' is adapted to be received in the grooved or channeled side of the section 4 and engaged by means of integral spring catches 6 projecting from the under side of the rib section 4. The extension 4'' of the lower section 4' projects a short distance above the pivotal connection 5 and the catches 6 of the section 4 are located adjacent to said pivotal connection so as to receive the extension 4'' therebetween, when the umbrella is open, and by spring engagement with opposite sides of the extension 4'' rigidly hold the extension against the under side of the section 4, the parts of the rib being thus held firmly in operative position.

The various ribs of the umbrella are con-

nected by stretchers 7 with the runner 8 which is mounted on the stick 1. For the above purpose the upper section 4 of each rib is formed with integral ears 9 with which the upper end of a cooperating stretcher 7 is pivotally connected.

As before premised herein, the cover 10 of the umbrella is detachably applied thereto. In general conformation the cover 10 is similar to those most commonly in use on umbrellas, said cover, however, being formed with a central re-inforced opening 11 adapted to receive the stick 1. When the cover is applied to the umbrella the re-inforced opening 11 is located just above the notch 12, said notch being formed with a tubular extension having an annular flange 13. The upper ends of the sections 4 of the ribs are connected with the notch 12 in the customary way. The form of the notch 12 is peculiar, as above described, in order that a spring cap 14, adapted to receive the upper end of the stick 1, may be engaged over the notch so as to clamp or engage the central portion of the cover 10 in the manner shown in Fig. 3, to secure this portion of the cover to the stick in a substantial way. The upper end of the detachable cap 14 is slit radially so as to virtually form a spring socket 14^a through which the flange 13 passes when the cap is placed in operative position, said flange engaging the socket portion of the cap and holding the latter in proper engagement with the cover 10. The cap 14 will of course be finished nicely to conform with the finish of the umbrella.

At intervals in the length of the seams 11' of the cover 10, spring clasps 15 are stitched or otherwise connected with the cover, said clasps being of somewhat U-form in cross section and adapted to engage and receive therein the ribs, when the cover is applied thereto. Certain of the clasps 15 are so arranged that they will engage over the portions of the rib sections 4 in which the end extensions 4'' of the sections 4' are received, such clasps cooperating with the catches 6 to hold the extensions 4'' and the upper rib sections 4 permanently together. At the outer ends of the seams 11' of the cover 10, small eyes 16 are applied, the same being adapted to engage in small hooks 17 projecting from the under sides of the rib sections 4' at the lower extremities of the latter.

The general arrangement and cooperation of the parts of the invention, when the umbrella is open or extended, will be evident from the foregoing description and on reference to the drawings. The tension on the cover 10 when the umbrella is raised is advantageous in increasing the rigidity of the ribs, and the runner 8 is so located that on raising the umbrella said runner assumes a position in which it incloses the joint 2 of the

stick 1, re-inforcing the joint and preventing likelihood of fracture or breakage of the stick at this point. The usual catch is applied to the stick 1 to hold the runner in the position shown in Fig. 1.

In folding the umbrella, the latter is partly closed and then inverted to relieve the tension on the cover 10; whereupon the runner 8 may be forced upwardly into a position near the notch 12 and the rib sections as well as stretchers 7 will be in close compact arrangement. The preliminary inversion of the umbrella causes the rib sections 4' and the portion of the cover carried thereby to move against that portion of the cover carried by the upper rib sections. When the body of the umbrella is collapsed the sections of the stick 1 may be unscrewed and thus separated so that the article may be readily placed in a small satchel, or the like.

The owner of the umbrella may substitute a handle of more or less value for that detachably secured to the stick 1 and this is advantageous for obvious reasons.

Should it be desired to remove the cover it is only necessary to disengage the eyes 16 from the hooks 17, the clasps 15 from the ribs, and detach the cap 14 from the stick 1. A different cover may be quickly and easily applied or substituted for that on the umbrella, according to the desire of the user.

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

1. In a collapsible umbrella, the combination of a stick, a notch on the upper end of the stick and provided with a tubular extension projecting upwardly therefrom, said tubular extension being formed at its upper portion with an annular flange, ribs connected with the notch, stretchers connected with the ribs, a runner mounted on the stick and connected with the stretchers, a detachable cover provided with a re-inforced central opening resting on the notch, means detachably connecting the cover and ribs, and a cap receiving the upper portion of the stick and provided with a spring socket at its upper end adapted to engage the flange of the notch extension whereby the cap is held in engagement with the central portion of the cover.

2. The combination with an umbrella comprising ribs consisting of sections, of means for holding the sections of the ribs in extended positions when the umbrella is open, a cover, and means detachably connecting the cover with the ribs and cooperating to hold the rib sections in extended positions.

3. In a collapsible umbrella, the combination of a stick, folding ribs connected therewith, means carried by said ribs to positively hold the same in extended positions, a detachable cover, and connecting means between the cover and the ribs also cooperating to hold the latter in extended position.

4. In a collapsible umbrella, the combination of a stick, sectional ribs connected with the stick and adapted to fold together, catches carried by certain sections of the rib
5 to engage with and hold the other sections in extended positions relative thereto, a cover, and clasps detachably connecting the cover with the ribs and engaging both sections of

the latter to assist in holding the ribs in extended positions.

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

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GEORGE C. SHIVERS.

Witnesses:

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