

No. 843,092.

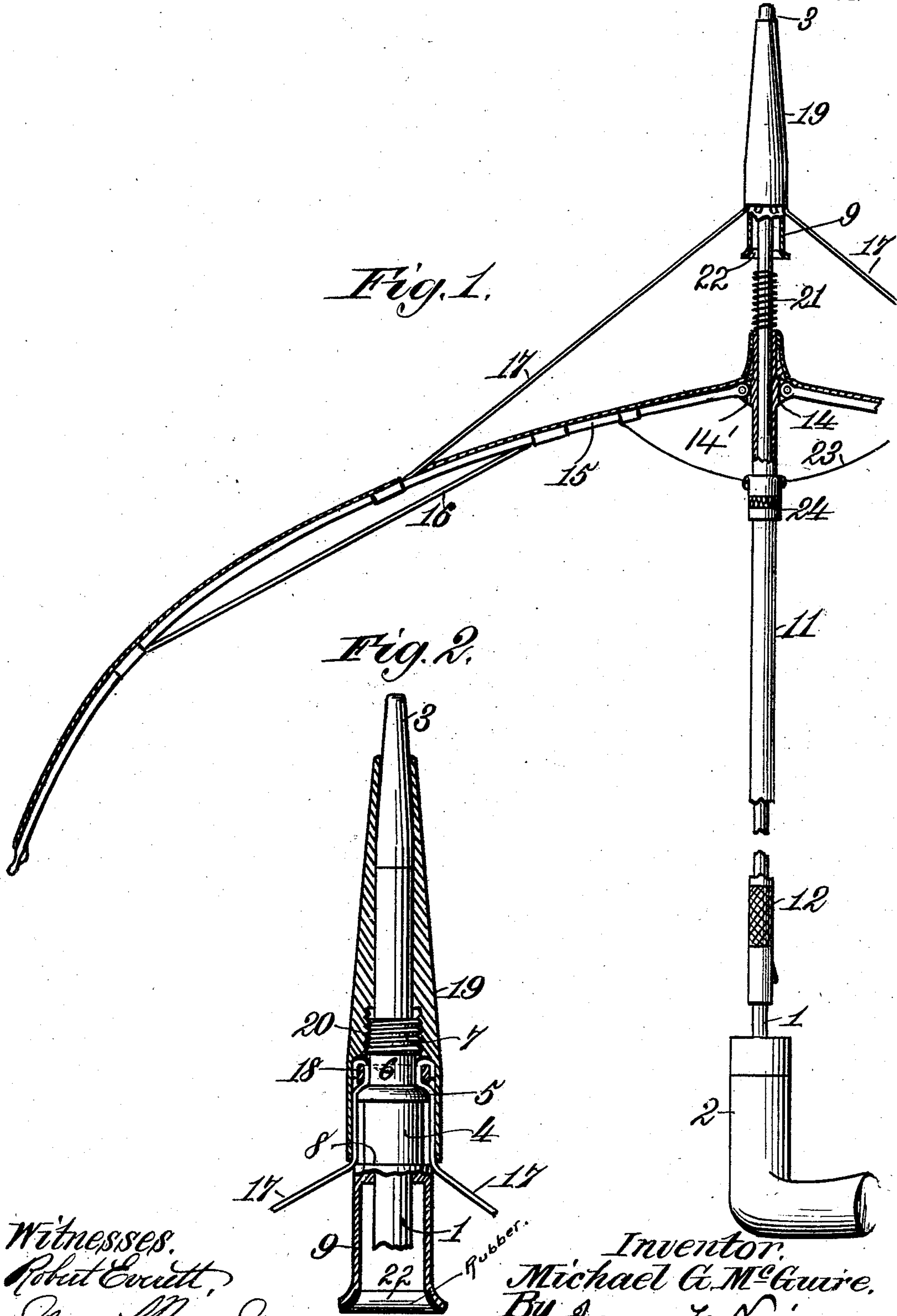
M. G. McGUIRE.

PATENTED FEB. 5. 1907.

UMBRELLA.

APPLICATION FILED MAY 24, 1905. RENEWED JULY 14, 1906.

2 SHEETS—SHEET 1.



Witnesses.
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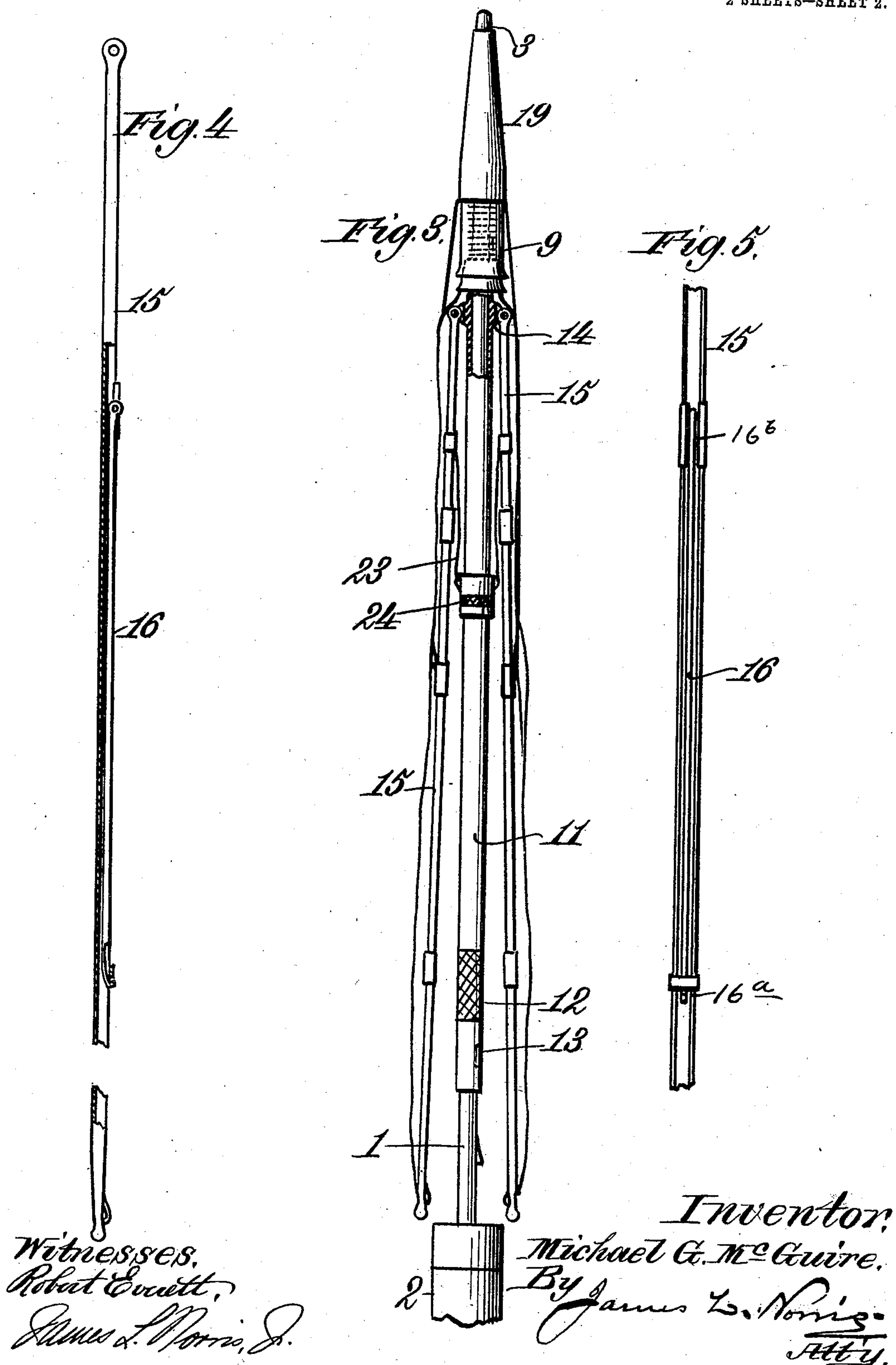
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UNITED STATES PATENT OFFICE.

MICHAEL G. McGUIRE, OF CHICAGO, ILLINOIS.

UMBRELLA.

No. 843,092.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed May 24, 1905. Renewed July 14, 1906. Serial No. 326,278.

To all whom it may concern:

Be it known that I, MICHAEL G. McGUIRE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

This invention relates to umbrellas, more particularly to certain new and useful improvements upon the construction of umbrella set forth in Letters Patent No. 555,729, granted to me March 3, 1896.

In the form of umbrella shown in the patent referred to a plurality of braces are employed which are fixed at their upper ends to the umbrella-stick and then passed through the umbrella-ribs and are connected at their lower ends to the inner face of the umbrella-ribs at a point removed from the lower end thereof. These braces are also provided with knots or knobs in close proximity to that point of the ribs through which the braces pass, the knots or knobs being adapted to bear upon said ribs and prevent the latter from slipping downward upon the braces when the umbrella is raised, thus affording a fulcrum for the ribs to turn on when the umbrella is open. At the same time as the umbrella spreads the portion of the braces between the knots or knobs and their point of attachment near the lower ends of the ribs afford an inner brace for such ribs, thereby preventing the umbrella from being turned inside out by sudden gusts of wind. It has been found that the knots or knobs are not very satisfactory and that the providing of the opening in the ribs to permit of the passage of the braces weakens them to a great extent, that the inner braces formed from a portion of the flexible braces are not satisfactory, that when the braces become broken or damaged it is somewhat difficult to replace them, owing to the manner in which the upper ends of the braces are secured to the stick, and that owing to the manner in which the upper ends of the braces are secured to the stick the connection was liable to cut through the braces, and, furthermore, to have the braces operate in a satisfactory manner it was necessary to have a little play at the connection between the upper end of the braces and the stick, which was not provided for in the construction shown in Patent No. 555,729.

To overcome the foregoing objections is the object of this invention, and such objections

are overcome by the construction of umbrella hereinafter more specifically referred to.

With the foregoing and other objects in view the invention consists of the novel construction, combination, and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In the drawings which form a part of this specification, and wherein like reference characters denote corresponding parts throughout the several views, Figure 1 is a sectional side elevation. Fig. 2 is an enlarged vertical section of the ferrule end of the stick. Fig. 3 is a view similar to Fig. 1 with the umbrella closed, and Figs. 4 and 5 are details of the ribs.

Referring to the drawings by reference characters, 1 denotes the umbrella-stick having at one end a handle 2 and at its other end a ferrule 3. At a point removed from the ferrule 3 the stick 1 has fixed thereto a sleeve 4, having at one end a beveled flange 5, and projecting from the said flange 5 is a cylindrical extension 6, having a portion of its length screw-threaded, as at 7. The other end of the sleeve 4 is also provided with a flange 8, but of greater diameter than the flange 5, and projecting from said flange 8 is a cylindrical extension 9 of greater diameter than the sleeve 4. The function of the extensions 6 and 9 will be hereinafter referred to.

Mounted upon the stick 1 is an elongated slidable sleeve 11, which when moved toward the handle 2 is adapted to spread the umbrella and when moved toward the ferrule 3 is adapted to close the umbrella. Said sleeve 11 is provided with a gripping portion 12 and also with a slot 13, into which engage suitable catches carried by the stick 1 for retaining the sleeve 11 in the position desired. The upper end of the sleeve 11 has connected thereto a collar 14, provided with ears 14', between which the ribs 15 of the umbrella are pivoted.

The ribs 15 are reinforced when the umbrella is spread through the medium of the inner brace members 16, which are slidably connected at one end, as at 16^a, to the ribs 15 and pivotally connected at their other end, as at 16^b, to the ribs 15. These brace members take the place of that portion of the flexible brace members of Patent No. 555,729 which extends from the knot or

knob to the end which is connected to the rib. The inner brace members 16 reinforce the umbrella in such a manner as to prevent the umbrella from being turned inside out by sudden gusts of wind.

The reference character 17 denotes the outer brace members, constructed of flexible material and fixed at their lower ends to the ribs 15 and at their upper ends are detachably clamped to the flange 5 through the medium of a collar 18, the collar having that portion opposing the flange 5 beveled. The collar 18 is retained in position through the medium of a shouldered sleeve 19, which has internal screw-threads 20, said threads engaging with the threads 7 of the extension 6, the collar 18 being mounted upon the smooth portion of the extension 6. The manner in which the outer braces 17 have their upper ends clamped is as follows: The ends are passed over the flange 5 and under the collar 18. The projecting ends of the members 17 are then bent over the collar 18. The sleeve 19 is mounted upon the stick and is screwed home, which retains the collar 18 in position and at the same time incloses the upper end of the stick and improves the appearance of the ferrule end of the stick.

Mounted upon the stick 1 and interposed between the ends of the sleeve 4 and the collar 14 is a coiled compression-spring 21, which acts as a spring-abutment during the closing of the umbrella and also assists in opening the umbrella, owing to the expansion of said spring, which acts against the sleeve 11. When the umbrella is closed, the spring is adapted to be inclosed by the extension 9. (See Fig. 3.) The extension 9 has its lower end provided with a rubber packing 22, which when the umbrella is closed snugly bears against the collar 14 and protects the spring 21.

By connecting the outer brace members to the ribs in the manner as shown and forming them independently of the inner brace members it is unnecessary to provide the ribs with openings, as in Patent No. 555,729. Therefore this manner of setting up the brace members increases the strength of the ribs. By connecting the upper ends of the outer brace members in a manner as shown—that is to say, between the beveled collar and beveled flange—if an outer brace member should become damaged it can be very readily replaced, as the collar 18 can be very easily removed after the sleeve 19 has been taken off the stick. The beveling of the flange 5 and collar 18 prevents the cutting of the flexible outer brace members, and the manner, as heretofore pointed out, of connecting the upper ends of the outer brace members allows for sufficient play so that the said members can be properly positioned.

To assist in closing the umbrella, two or more of the ribs may have connected to the

inner face thereof flexible cords or other equivalent flexible medium 23, which are also connected to a shiftable collar 24, mounted on the sleeve 11. After the sleeve 11 has been released the umbrella can be very readily closed by grasping the collar 24 and moving it toward the handle end of the stick. The cords 23 move with the collar 24, carrying the ribs therewith, thereby closing the umbrella.

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

1. An umbrella comprising a stick, a sleeve fixed thereon near one end thereof and having a flange and a screw-threaded extension, a slidable sleeve mounted on the stick ribs pivotally connected to the sleeve, outer brace members connected at one end to the ribs, a collar mounted upon said extension, associating with said flange and adapted to connect the other ends of the braces to said fixed sleeve, and a sleeve having internal screw-threads and an internal shoulder mounted upon said fixed sleeve and engaging the screw-threads of the extension and adapted to retain the collar in position.

2. An umbrella comprising a stick, a sleeve fixed thereon near one end thereof and having a flange and a screw-threaded extension, a slidable sleeve mounted on the stick, ribs pivotally connected to the sleeve, outer brace members connected at one end to the ribs, a collar mounted upon said extension associating with said flange and adapted to connect the other ends of the braces to said fixed sleeve, a sleeve having internal screw-threads and an internal shoulder mounted upon said fixed sleeve and engaging the screw-threads of the extension and adapted to retain the collar in position, inner braces having the ends thereof connected to the ribs, and a spring interposed between said slidable sleeve and said fixed sleeve.

3. An umbrella comprising a stick, a slidable sleeve mounted thereon and carrying at one end a notched collar provided with ears, ribs pivotally connected to the ears of said collar, a sleeve fixed to said stick and provided with a cylindrical extension engaging said collar, a spring interposed between said fixed sleeve and said notched collar and inclosed by said extension, outer brace members having one end secured to said ribs, and means for detachably connecting the other end of said brace members to said fixed sleeve.

4. An umbrella comprising the combination with the body thereof, of outer brace members therefor, said brace members connected at one end with the umbrella-body, a beveled flange connected to the umbrella-stick, and a collar associating with said flange and adapted to detachably connect the upper ends of the brace members to the stick.

5. An umbrella comprising the combination with the body thereof, of outer brace members therefor, said brace members connected at one end with the umbrella-body, a beveled flange connected to the umbrella-stick, a collar associating with said flange and adapted to detachably connect the upper ends of the brace members to the stick, and means mounted upon the stick of the umbrella for inclosing and retaining said collar in position.

6. An umbrella comprising a spring-abutment, outer braces for the umbrella-body, a fixed sleeve provided with an extension and adapted to inclose said abutment, and means associating with said fixed sleeve for detachably connecting the outer brace members with the stick of the umbrella.

7. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, cords constituting outer brace members having one end connected to the ribs, and means for detachably connecting the other ends of the cords to the umbrella-stick.

8. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, outer brace members having one end connected to the ribs, means for detachably connecting the other ends of the outer brace members to the umbrella-stick, and means for inclosing and retaining said connecting means in position.

9. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, outer brace members having one end connected to the ribs, means for detachably connecting the other ends of the outer brace members to the umbrella-stick, means for inclosing and retaining said connecting means in position, and a spring-abutment interposed between the connecting means and said slidable sleeve.

10. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, cords constituting outer brace members having one end connected to the ribs, means for detachably connecting the other ends of the outer

brace members to the umbrella-stick, and means connected with the ribs and shiftable upon said sleeve for closing the umbrella.

11. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, cords constituting outer brace members having their lower ends connected to the ribs and their upper ends free, means for detachably connecting the upper ends of the outer brace members to the umbrella-stick, means for inclosing and retaining said connecting means in position, and means connected with the ribs and shiftable upon said sleeve for closing the umbrella.

12. An umbrella comprising a stick, a slidable sleeve mounted thereon, ribs pivotally connected to said sleeve, inner brace members for said ribs, said brace members having their ends connected to the ribs, outer brace members having one end connected to the ribs, means for detachably connecting the other ends of the outer brace members to the umbrella-stick, means for inclosing and retaining said connecting means in position, a spring-abutment interposed between the connecting means and said slidable sleeve, and means connected with the ribs and shiftable upon said sleeve for closing the umbrella.

13. An umbrella comprising a stick, ribs pivotally connected therewith, inner brace members for said ribs, said brace members having their ends connected to the ribs, outer brace members having one end connected to the ribs, means for detachably connecting the other ends of the outer brace members to the umbrella-stick, and a shiftable means connected to the ribs and to the stick for closing the umbrella.

14. An umbrella comprising a stick, ribs pivotally connected therewith, inner brace members for said ribs, said brace members having their ends connected to the ribs, cords constituting outer brace members having their lower ends connected to the ribs and their upper ends free, and means for detachably connecting the upper ends of the outer brace members to the umbrella-stick.

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

MICHAEL G. McGUIRE.

Witnesses:

N. L. BOGAN,
GEO. W. REA.