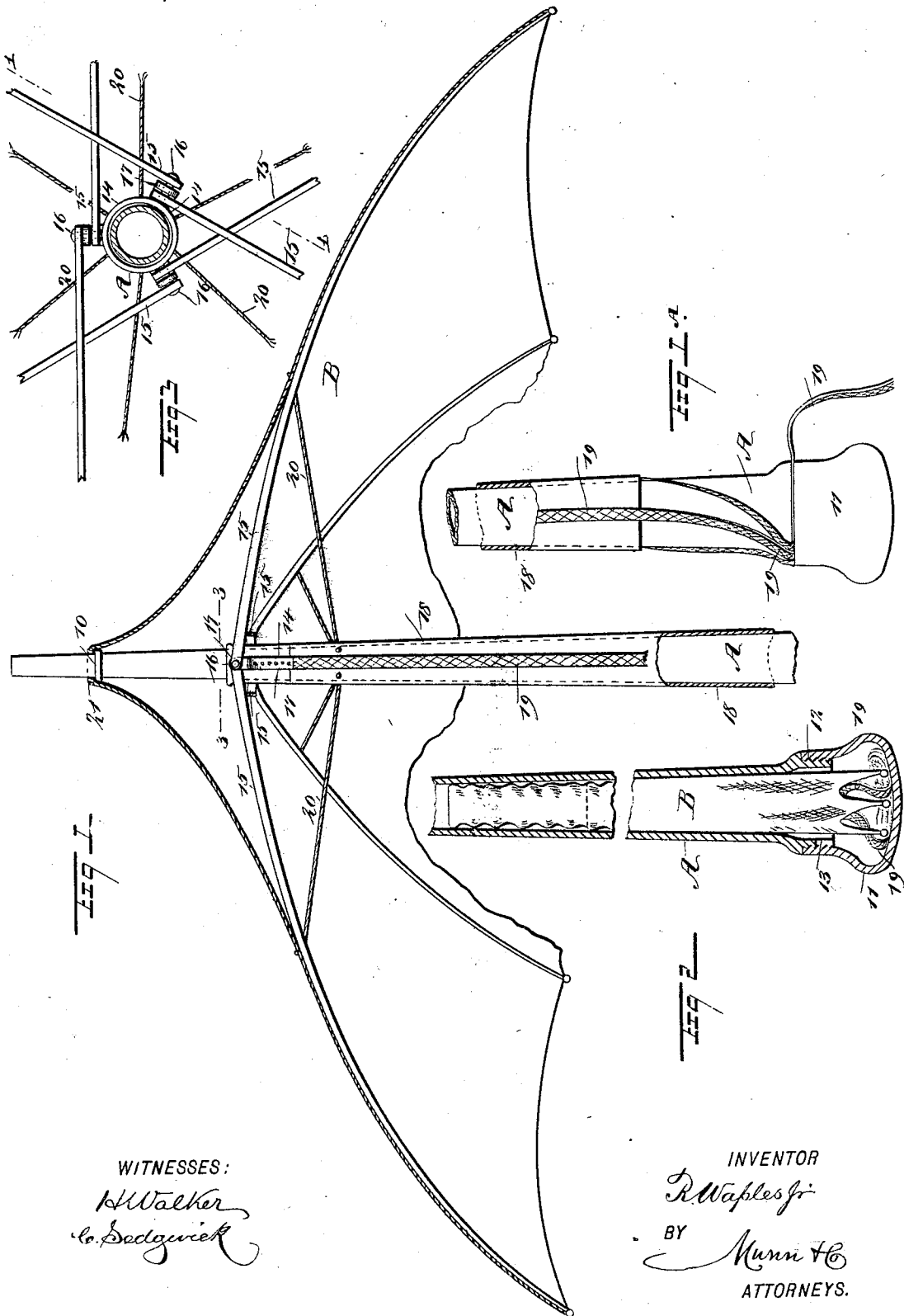


(No Model.)

R. WAPLES, Jr.
UMBRELLA CANE.

No. 517,315.

Patented Mar. 27, 1894.



WITNESSES:

H. Walker
Co. Sedgwick

INVENTOR

R. Waples Jr.

BY

Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

RUFUS WAPLES, JR., OF NEW YORK, N. Y.

UMBRELLA-CANE.

SPECIFICATION forming part of Letters Patent No. 517,315, dated March 27, 1894.

Application filed July 5, 1893. Serial No. 479,620. (No model.)

To all whom it may concern:

Be it known that I, RUFUS WAPLES, JR., of New York city, in the county and State of New York, have invented a new and Improved Umbrella-Cane, of which the following is a full, clear, and exact description.

My invention relates to an improvement in umbrella canes, and it has for its object to improve the construction designed by me and illustrated and described in United States Letters Patent which were granted to me on January 3, 1893, No. 489,351.

The prime object of this invention is to provide a means of bracing the inner ends of each of the ribs against the opposite rib or ribs by a pivotal attachment, which will permit of freely closing and opening, and which will relieve the flexible collar forming a portion of the subject matter of the above mentioned patent of the strain or tension of the cover against the ribs, applied at the attachment of the ribs to the collar when the canopy is expanded.

A further object of the invention is to provide means whereby a metal strap, plate, ring, strip or flange may be durably fastened to the attached ends of the ribs by being pivoted to them or between them, in such manner that durability will be greatly increased and bulk will not be sensibly added, and the process of manufacture may be much more rapid.

A further feature of the invention is to secure a sufficient bearing for a single rib instead of employing a forked one.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the cane having mounted thereon a canopy, the whole constituting an umbrella, the canopy or body section of the umbrella being shown in vertical section. Fig. 1^a illustrates that part of the cane absent from Fig. 1. Fig. 2 is a partial vertical section through the cane, illustrating the canopy as folded up therein, the canopy being shown in side elevation; and

Fig. 3 is a section taken horizontally on the line 3—3 of Fig. 1.

The cane A, which is to be the support or stick for the umbrella B when the device is used as an umbrella, is hollow, and near its ferruled end is provided exteriorly with a flange or collar 10, and the head 11 of the cane is removable from the body. The two parts are connected in any approved manner, but ordinarily the head is secured upon reduced or shouldered portion 12 of the body of the cane, as shown in Fig. 2, and this reduced or shouldered portion, when it is employed, has openings 13 made therein, the openings being ordinarily diametrically opposite.

The canopy or body portion of the umbrella B, may have its cover made of silk, waterproof material, or a fabric of any description, and the lightest material practicable for such purposes is preferably employed. The cover portion of the canopy is cut and constructed in similar manner as is the cover of an ordinary umbrella or parasol, but the supporting section for the cover and which completes the formation of the canopy differs from that of the ordinary umbrella or parasol, and it consists of the following parts: What may be denominated a runner 14, is adapted to slide upon the body portion of the cane. This runner ordinarily consists of a flexible leather, fabric or metal ring or sleeve, as is best shown in Fig. 3, and to this ring or sleeve the ribs 15 of the canopy are pivotally attached at their inner ends, the ribs being secured to the cover of the canopy in any suitable or approved manner.

The prime feature of this invention relates to the connection between the ring, sleeve or runner 14 and the ribs. The connection is a pivotal one, and is obtained through the medium of rivets 16.

The details of the connection may be stated as follows: A series of metal strips or plates 17 is secured at suitable distances apart, usually longitudinally or vertically upon the exterior of the runner 14. These plates may be stitched upon the runner, being provided with a series of apertures as shown in Fig. 1; or the plates may be riveted, cemented or secured to the runner in any manner known to the trade. The upper ends of the plates

are not attached to the runner but are carried upward a predetermined distance from the outer face of the runner, as shown in Fig. 3, whereby the upper portion of each plate is given what may be termed a bracket formation. It will be understood, however, that these plates may be made perfectly straight throughout their length, or they may be more or less curved or bent at their upper ends; ordinarily, however, they are made as straight as possible.

Upon either side of the top or bracket section of each bracket plate, the inner ends of two ribs 15, are placed, one rib being in engagement with the outer face of the runner and one being located against the outer side of the bracket, both of them being in engagement with the bracket plate. The inner ends of the ribs, as is likewise shown in Fig. 3, are located side by side, although they are on opposite sides of the bracket plate; and a rivet or pin 16, is passed through the outer rib, the bracket section of the plate 17, and through the second rib located adjacent to the plate, the pin being properly headed upon both ends.

The two ribs which are pivoted to the bracket section of a stay or bracket plate 17, extend in substantially diametrically opposite directions, and ordinarily three sets of stay or bracket plates 17, are employed, as is likewise shown in Fig. 3; and the upper or bracket ends of the plates are at different distances from the upper end of the runner, so that they are not in the same horizontal plane; therefore, the ribs emanating from the bracket section of one stay or bracket plate will cross the other ribs in such manner as not to interfere with them, and under this construction a number of triangular figures are formed around the runner, and it is evident that the runner may be carried downward to a position to spread the canopy, or upward to a position to lower or close it with but little effort on the part of the manipulator, since the strain or tension on the ribs as they are bowed will be upon the rivets, and the tension of a rib at one side of the canopy will be counteracted in a great measure by the diametrically opposite rib. It will also be observed that undue tension or strain is not brought to bear upon the runner, and in fact the runner will not be influenced detrimentally by the action of the ribs either in closing or in opening the umbrella.

The ribs are not in any manner secured to the extreme upper portion of the cover of the canopy. The ribs are attached to the cover only at their lower ends, and preferably at a point between their centers and inner or upper extremities, as shown in Fig. 1, so that when the cover is extended or opened a space is obtained between the upper inner portions of the ribs and the upper portions of the cover.

The runner is securely attached to one end of a guide sleeve 18. This sleeve is made of a flexible and a light material, such as fabric, and it is adapted to fit loosely to the body of

the cane and extend downward or in direction of its head some distance, or as far as in practice may be found desirable and advantageous.

The runner has secured thereto a series of cords 19, two cords being shown in the drawings. The cords may be secured between the stay plates and the runner, as illustrated, or may be carried downward upon the outer face of the sleeve, being attached to the sleeve as far as it extends, or the latter attachment may be omitted if found desirable; or the cords may be carried downward upon the inside of the sleeve, but preferably they are exteriorly located, as the cords are intended to assist in opening the umbrella, and by giving them all the bearing possible upon the runner and the sleeve the best results are obtained.

Instead of the ordinary braces being employed to prevent the ribs from being forced outward too far by the action of the wind, for example, flexible braces 20, are substituted, these braces being usually made of cord, or the equivalent thereof. They are attached at their outer ends to the ribs, preferably at that point where the ribs are secured to the cover, while the inner ends of the cords are securely fastened to the guide sleeve 18.

The canopy is provided at its upper central section with an opening usually encircled by a ring 21, and this ring may be flexible and is adapted to rest upon the flange of the cane body when the cane and canopy are to be utilized as an umbrella. The guide sleeve 18, serves not only as a guide for the cords or draw strings 19, but it also serves as a guide for the cane when the latter is to be inserted through the runner and through the opening in the cover of the canopy, enabling the attachment between the canopy and the cane to be not only conveniently but expeditiously effected.

In operation, after the canopy has been placed upon the cane, the canopy is opened out for use as an umbrella by drawing down upon the cords or draw strings 19 which lead to the head portion of the cane, and when the canopy has been sufficiently stretched it is held in that position by passing all the cords through the openings 13 in the cane body, and then screwing upon the body the head 11, as shown in Figs. 1^a and 2. By this means a secure and ready locking device is obtained, but other forms of locking devices may be substituted, if found necessary, although that shown and described is the one preferred on account of its simplicity and security.

When the umbrella is no longer needed, the head of the cane is removed and the canopy is withdrawn from the body of the cane, folded up and entered into the interior of the body, as shown in Fig. 2; and after the head of the cane has been attached to the body thereof, the cane may be used as a walking stick, and

will be in every respect a cane, the canopy being entirely concealed.

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

5 Patent—

1. An umbrella canopy, adapted to be secured to a stick or cane and comprising a cover, and a runner having radial brackets, each bracket having a pair of ribs pivoted thereto, and the ribs of each pair extending from the runner in diametrically opposite directions, substantially as shown and described.

2. The combination with a stick or cane, of a canopy adapted to be supported on the stick or cane, the said canopy comprising a cover, a runner having radial brackets each bracket having a pair of ribs pivoted thereto and the ribs of each pair extending from the runner in diametrically opposite directions, a guide sleeve projected from the runner, braces connecting the sleeve and ribs, and means substantially as shown and described for manipulating the sleeve and runner, as and for the purpose specified.

3. The combination with a stick or cane, of a canopy adapted to be supported by the stick or cane or to be removed therefrom, the frame of the said canopy consisting of a runner

adapted to have sliding movement on the cane, a sleeve projected from the runner and through which the cane is to be passed radial brackets attached to the runner, a pair of ribs pivoted to each bracket, the brackets being in different horizontal planes and the ribs of each pair extending from the bracket in diametrically opposite directions, and means substantially as shown and described for manipulating the runner and sleeve as and for the purpose specified.

4. In an umbrella, a canopy frame adapted to be secured to a stick or cane and comprising a runner, radial brackets connected with the runner, ribs connected to the brackets, each bracket having a pair of ribs pivoted thereto, the brackets being in different horizontal planes, and the ribs of each pair extending from the bracket in diametrically opposite directions, a sleeve attached to the runner, and flexible braces connecting the sleeve and ribs, substantially as and for the purpose set forth.

RUFUS WAPLES, JR.

Witnesses:

JAMES C. BIDDLE,
J. K. DOLBOW.