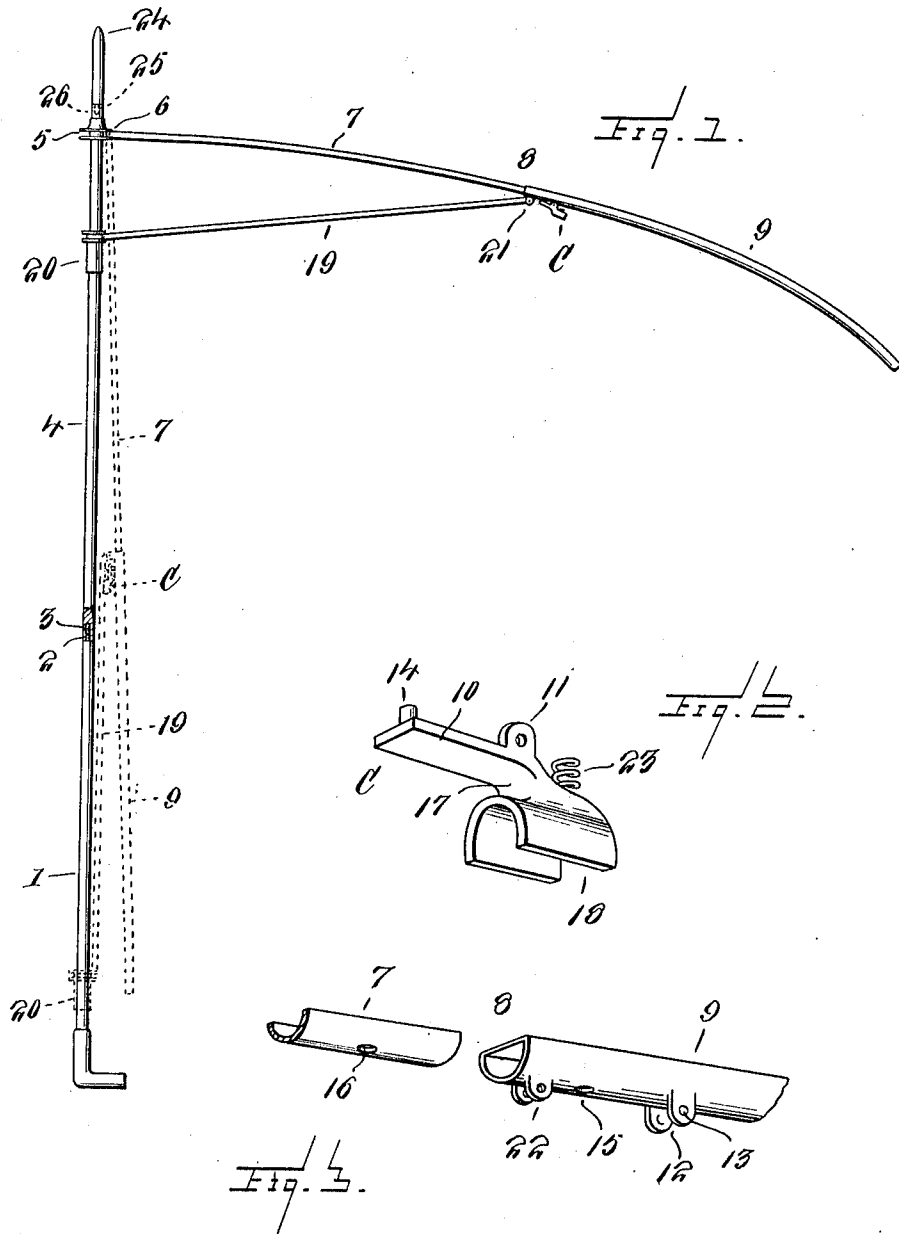


E. F. FINK.
 UMBRELLA.
 APPLICATION FILED MAY 10, 1911.

1,020,816.

Patented Mar. 19, 1912.



Witnesses

E. G. Ruppert.
 R. B. Evans.

Inventor
 Elba F. Fink

By Victor J. Evans
 Attorney

UNITED STATES PATENT OFFICE.

ELBA F. FINK, OF NILES, MICHIGAN.

UMBRELLA.

1,020,816.

Specification of Letters Patent. Patented Mar. 19, 1912.

Application filed May 10, 1911. Serial No. 626,152.

To all whom it may concern:

Be it known that I, ELBA F. FINK, a citizen of the United States, residing at Niles, in the county of Berrien and State of Michigan, have invented new and useful Improvements in Umbrellas, of which the following is a specification.

This invention relates to certain novel and useful improvements in umbrellas, and has particular application to collapsible umbrellas.

In carrying out my invention, it is my purpose to provide an umbrella which may be readily collapsed and the parts folded so that when stored the article will occupy a comparatively little space, so that it may be placed within a traveling case or the like.

Still a further object of my invention is to provide a construction of umbrella wherein the parts of the frame, such as the rod or stick, the ribs and the braces, are of simple yet strong and durable construction, and so arranged that they may be readily and quickly manipulated by the user.

I also aim to provide an umbrella of the type described which may be manufactured and marketed at a comparatively low cost. With the above recited objects and others of a similar nature in view, my invention consists in the construction, combination and arrangement of parts set forth in and forming the scope of the appended claims.

In the accompanying drawing:—Figure 1 is a view partly in elevation and partly in section of an umbrella frame embodying my improvements, the collapsible position of the frame being illustrated in dotted lines. Fig. 2 is a detail perspective view of the rib lock. Fig. 3 is a similar view, showing the two connected sections of the rib.

Referring now to the accompanying drawing in detail, the numeral 1 indicates the lower handle portion of the stick or rod which is provided with a threaded shank 2 screwed into the threaded socket 3 of the upper section 4 of the rod or stick. At the upper end of the rod section 4 is the ordinary notched disk 5 designed to receive the ends 6 of the slotted rod-like section 7 of the umbrella ribs 8, these sections 7 being designed to slide or telescope

within the lower semi-cylindrical or hollow rib sections 9.

In order to connect the rib sections 7 and 9, I provide a catch such as is indicated as an entirety by the letter *c*. This catch comprises a plate 10 having a perforated lug 11 designed to be connected to the imperforate ears 12 near the end of the semi-cylindrical rib section 9, through the medium of a pivot 13. The outer end of the plate 10 is provided with a catch or projection 14 designed to pass through an opening 15 in the rib section and to seat within the recess or socket 16 formed in the slotted rib section 7 and in alinement with the aperture opening 15. Extending upward from one end of the plate 10 is an arm 17 carrying the longitudinal grooved head or support 18 within which is designed to bear the brace 19 as hereinafter described. Mounted upon the rod section 4 is the ordinary runner 20 carrying the braces 19, each of said braces being pivotally connected as at 21 to the lugs 22 carried at the end of the semi-cylindrical hollow rod sections. The head or support 18 of the catch is further provided with an expansion spring 23 normally designed to hold the catch 14 in locking engagement with the aperture in the rib sections.

From the above description, taken in connection with the accompanying drawing, the construction and operation of my improved collapsible umbrella will be readily apparent to those skilled in the art.

When the umbrella is in its raised or expanded position it is as shown in full lines in Fig. 1. When it is desired to collapse the umbrella, the runner 20 is lowered in the ordinary manner, thereby swinging the braces 19 downward as shown in dotted lines so that said braces lie within and contact with the head 18, thereby depressing the latter against the action of the spring and throwing the projection 14 out of locking engagement with the notch and opening of the rib sections. The rod-like rib section may now be telescoped within the lower semi-cylindrical sections and the braces will also lie alongside the same, as shown in the drawing. The sections of the stick or rod may now be unscrewed at the joint, and if desired, the tip of the stick shown at 24 may be provided with a threaded shank screwing into the threaded socket 26 so that

said tip may be likewise removed to further shorten the length of the collapsed article.

It will be noted that I have provided an exceedingly simple yet convenient form of collapsible umbrella which may be quickly operated to fold the same for storage in a small space.

Having thus described my invention, I claim:—

1. In an umbrella, the combination with a stick and a runner thereon, of a notched collar or ring carried by the stick, a plurality of upper rib members connected to said ring or collar, each upper rib member having a recess therein, a plurality of lower tubular rib sections semi-cylindrical in form and adapted to telescope the first-mentioned rib sections, each of said lower rib sections having an opening therein adapted to be brought into alinement with the recess with the companion of the upper rib section, a catch pivotally mounted on each lower rib section, said catch comprising a body portion formed to a plate carrying a stud adapted to pass through the opening in the lower rib section and into the recess in the alining rib section, the plate of the catch having a grooved member formed integral and at an angle therewith, a spring normally pressing against the grooved member to force the pin into locking engagement with the rib sections, and braces extending

from the runner on the stick and connected to the lower rib sections adapted to contact with the grooved members of the catches to throw the latter out of locking engagement.

2. In an umbrella, the combination with a stick and a runner thereon, of a lower rib section having an opening therein and an upper rib section telescoping in the lower rib section, the upper rib section having a recess therein adapted to be brought into alinement with the opening in the lower rib section, a brace rod connected to the runner and to the lower rib section, and means for locking the two rib sections together comprising a catch pivoted to the lower rib section and having a plate provided with a locking member adapted to project through the opening in the lower rib section and into the recess in the upper rib section and locking the two sections together, a semi-cylindrical hollow member carried by the plate on the opposite side from the locking member and adapted to be contacted with by the brace to release the rib sections from locking engagement, and tension means normally holding the catch in locking position.

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

ELBA F. FINK.

Witnesses:

BERNARD C. KAISER,
HOWARD E. CARPENTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."