

J. H. SCHUTTE.  
FOLDING UMBRELLA.  
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920,400.

Patented May 4, 1909.

2 SHEETS—SHEET 1.

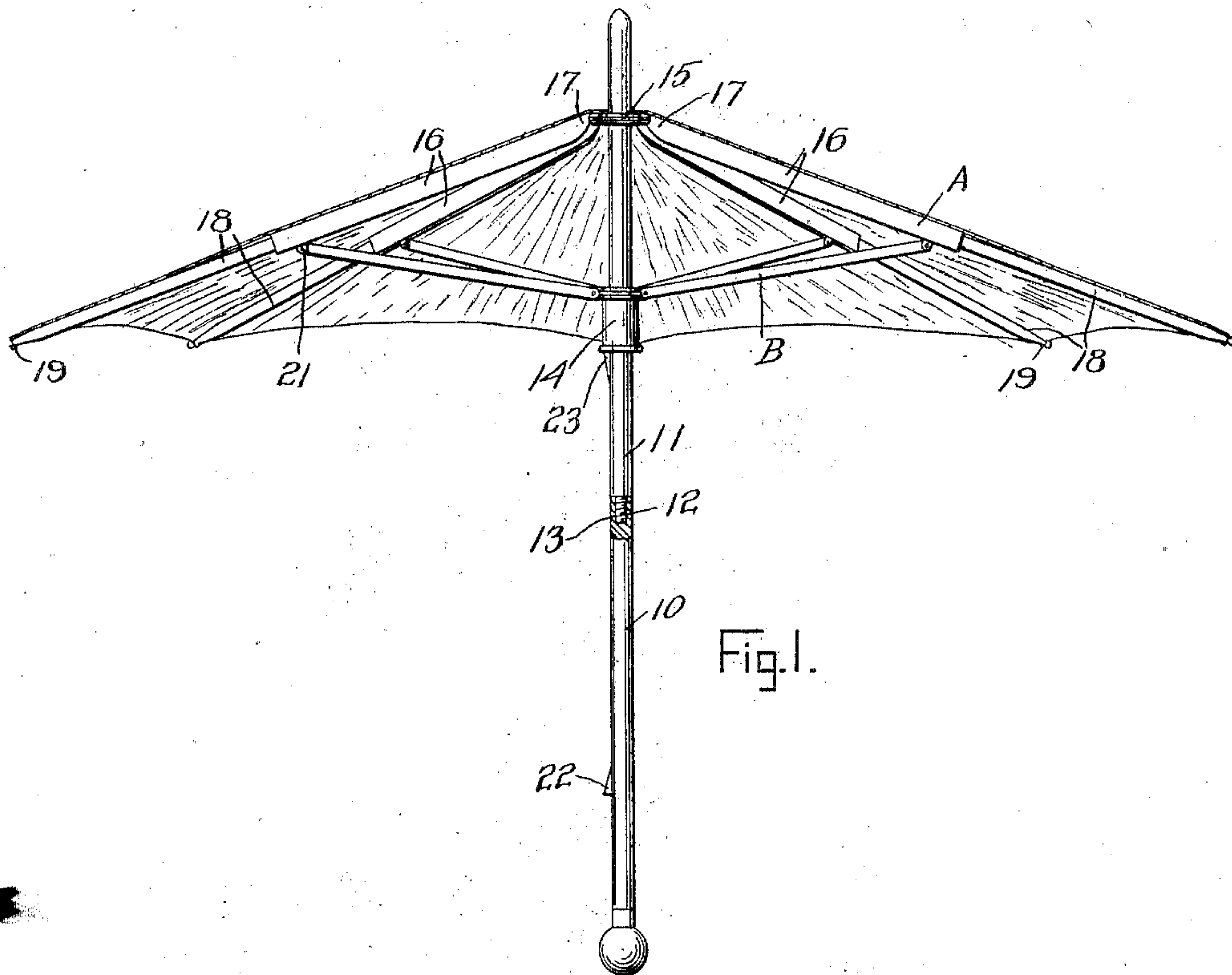


Fig. 1.

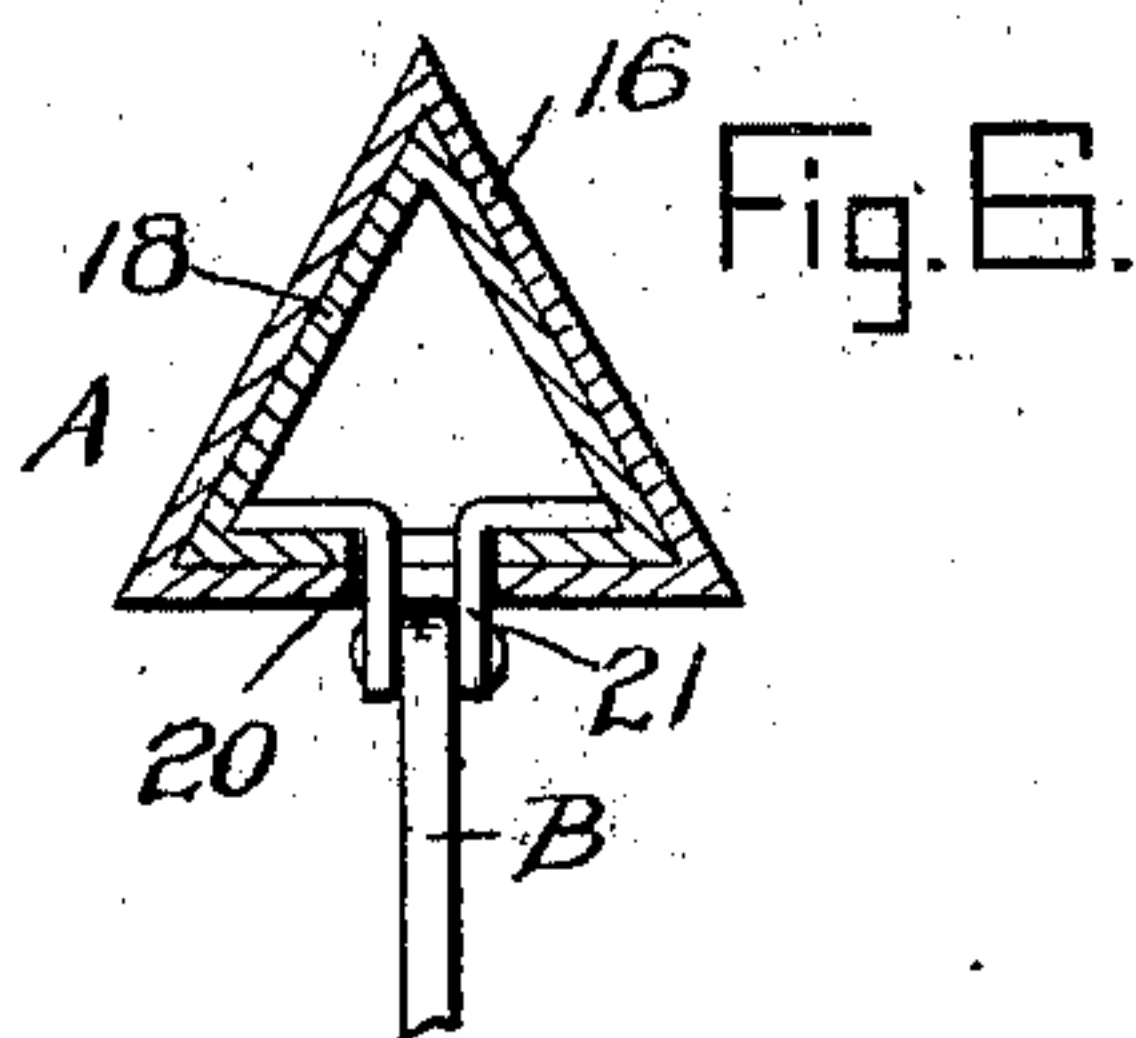


Fig. 6.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## FOLDING UMBRELLA.

No. 920,400.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed March 14, 1908. Serial No. 421,068.

*To all whom it may concern:*

Be it known that I, JOHN H. SCHUTTE, a citizen of the United States, residing at North Tonawanda, in the county of Niagara, State of New York, have invented certain new and useful Improvements in Folding Umbrellas; 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 folding umbrellas and has for its object to provide a novel construction of umbrella of this class which may be manufactured at but slightly greater cost than the present umbrellas of the non-foldable type.

In order that the ribs of the umbrella embodied in my invention may be folded, I form them of telescopic sections, and connect to one of the stay ribs of the umbrella frame one of the sections of each rib, these stay ribs being connected also to the runner upon the staff of the umbrella.

In the accompanying drawings, Figure 1 is a view partly in elevation and partly in section of the umbrella, Fig. 2 is a similar view but showing the umbrella folded with the ribs extended but not folded. Fig. 3 is a similar view showing the umbrella folded and the ribs telescoped. Fig. 4 is an enlarged detail side elevation of one of the main ribs of the umbrella frame, Fig. 5 is a vertical longitudinal sectional view through one of the main ribs, and, Fig. 6 is a vertical transverse sectional enlarged view through one of the said main ribs.

In the drawings, there is shown an umbrella staff comprising a section 10 and a section 11, the section 10 being formed with a threaded socket 12 for the reception of the threaded reduced inner end 13 of the section 11, it being understood that this connection between the two sections permits of them being separated when it is desired to completely fold the umbrella.

The runner of the umbrella is indicated by the numeral 14 and the head by the numeral 15, the main ribs, indicated in general by the reference character A, being pivoted to the head 15 and the stay ribs, indicated in general by the reference character B, being pivoted to the runner and to the main ribs.

Each of the main ribs of the umbrella is comprised of two sections, one an upper section and the other a lower section. The up-

per section of each rib is in the form of a triangular metal tube and each lower section is in the form of a similar triangular metal tube and fitted telescopically within its corresponding upper section, and is thus similar in form except that it is provided with a longitudinal slot along its under side. The upper end of each upper section, which section is indicated by the numeral 16, is pressed together to form an ear 17 which is pivoted in one of the notches in the head 15, and the lower end of each lower section, which section is indicated by the numeral 18, is tapered, headed and provided with an eye as at 19 to simulate the tip and the cover fastening means of the main rib of an ordinary umbrella. The under or inner side of the upper section of each main rib is formed with a slot 20 as before noted which extends from the upper end of the section to a point adjacent the lower end thereof, and working in this slot in each section 16 is a pair of coupling members 21 which are attached inside the respective section 18 and project through the slot, as shown. Between each pair of these ears is pivoted the upper or outer end of one of the respective stay ribs B.

The umbrella being open, and it being desired to close it, the runner 14 is pulled in the direction of the handle end of the umbrella staff and locked by means of the ordinary form of spring catch 22, there being another spring catch 23 provided about the middle of the upper section 11 of the staff for holding the runner in raised position. Should it be desired to fold the umbrella after it has been closed, the umbrella is grasped with one hand, near its head, and the runner 14 slid upon the staff in the direction of the tip end thereof until the parts have assumed the position shown in Fig. 3 of the drawings, it being understood that this movement of the runner serves to telescope the sections 18 in the sections 16.

Each upper rib section 16 is formed with a flat side with the longitudinal slot 20 centrally of the flat side, while the lower rib section 18 is formed to correspond to and bear by its entire outer surface against the inner surface of the upper rib section, so that no matter at what point the lower rib section may be disposed relative to the upper rib sections they will engage clearly at all sides against the interior surfaces of the upper rib sections, so that no rattling or looseness can occur between the rib sections no matter to



what point the lower rib sections may be projected or withdrawn. The clip coupling member 21 is formed of two L-bars, as shown with a leg of each connected to one of the  
5 flat sides of the inner tubular sections 18 and with the other leg portions spaced apart and projecting through the slot 20 of the upper rib sections in position to receive the stay  
10 rib member B. By this simple means a very compact and efficient device is produced, which may be inexpensively manufactured, and retains its rigidity at all times either in folded or projected position.

What is claimed, is:—

15 An umbrella comprising a staff, a head, and a runner upon the staff, a series of upper rib sections each formed of a tubular member flat at one side and with a longitudinal slot through said flat side, means for swing-  
20 ingly connecting said upper rib sections re-

spectively to said head, a series of lower rib sections each formed of a tubular member corresponding to and slidably engaging in one of the upper rib sections and with a flat side bearing upon the flat side of one of the  
25 upper rib sections, a coupling device comprising two L-bars each connected by one of its legs to the inner face of the lower rib sections and with the other legs spaced apart and extending through the slot of the upper  
30 rib section, and a series of stay ribs each pivoted at one end between the spaced portions of the L-bars and at the other end to said runner.

In testimony whereof, I affix my signature, 35  
in presence of two witnesses.

JOHN H. SCHUTTE.

Witnesses:

RALPH W. SIMSON,  
CHAS. J. KNOELL.