L. H. CARTER.

UMBRELLA FRAME.

APPLICATION FILED MAR. 25, 1909.

947,790. Patented Feb. 1, 1910.

Fig. 1.

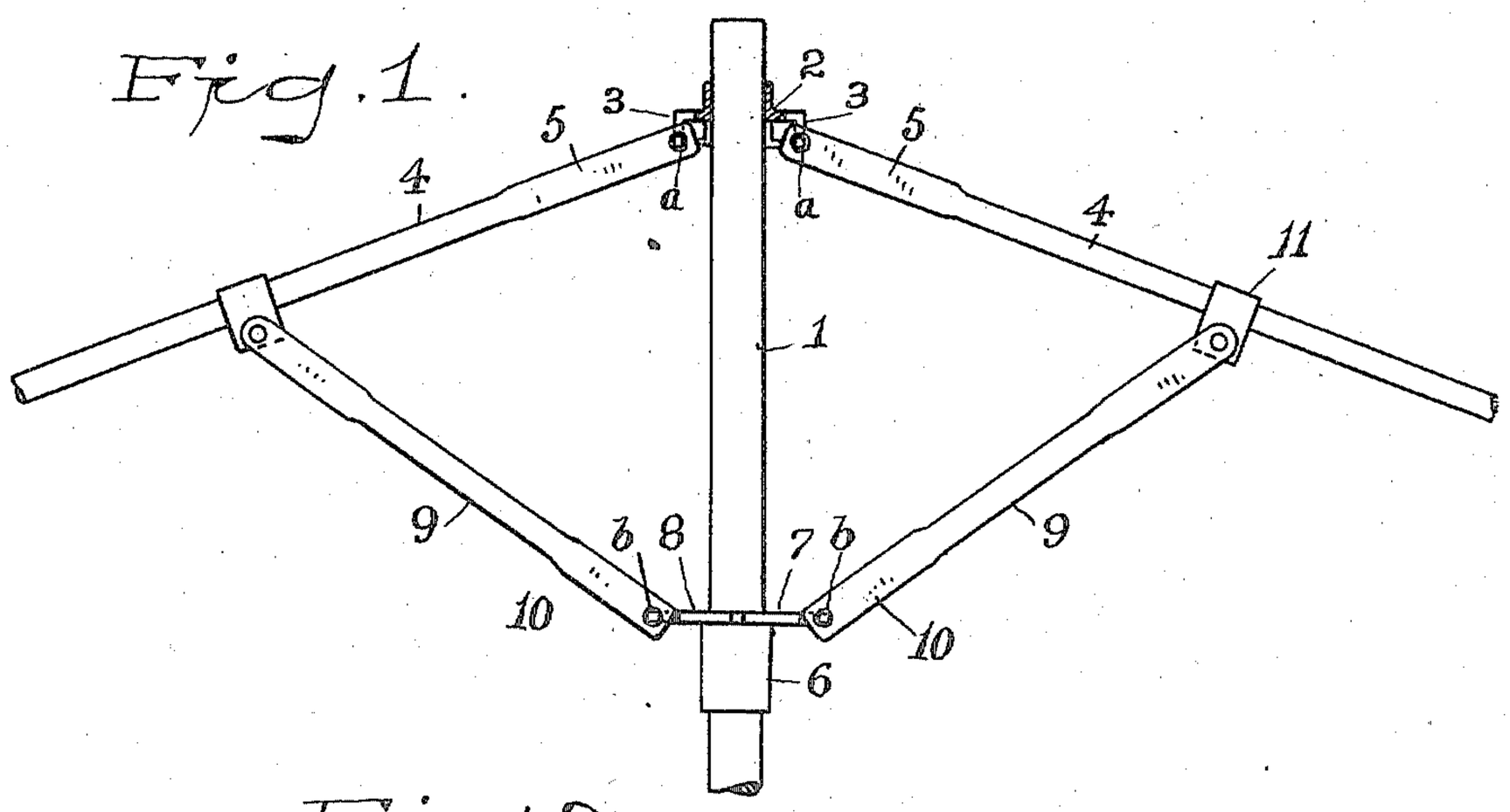


Fig. 2.

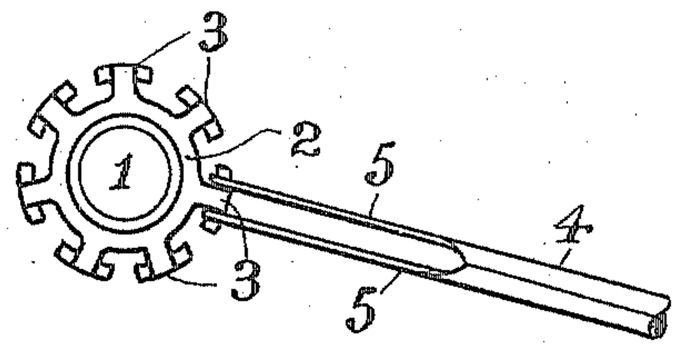


Fig. 3.

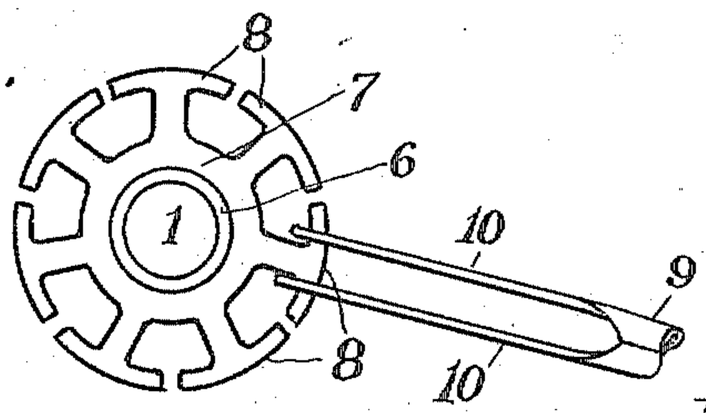


Fig. 5.

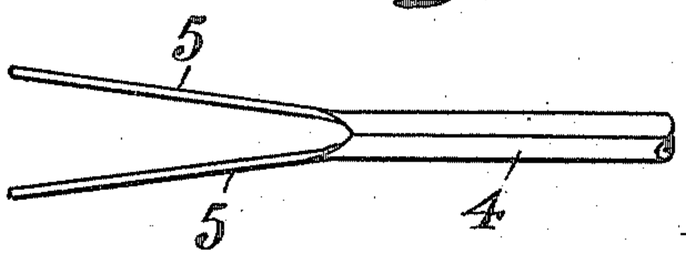


Fig. 4.

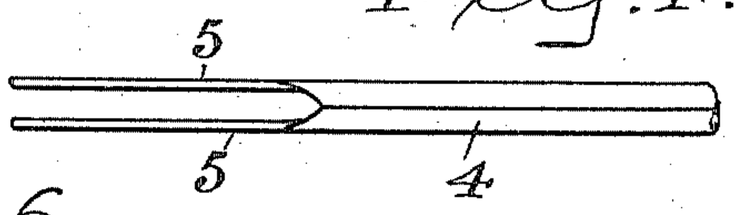


Fig. 6.

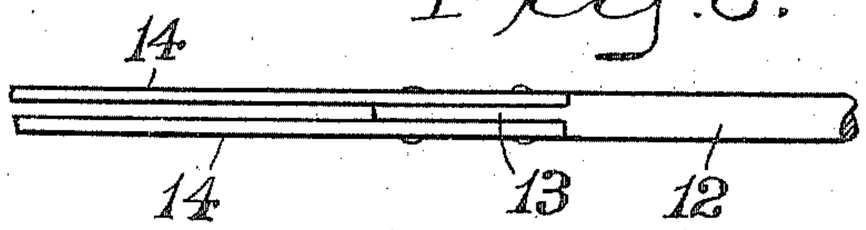
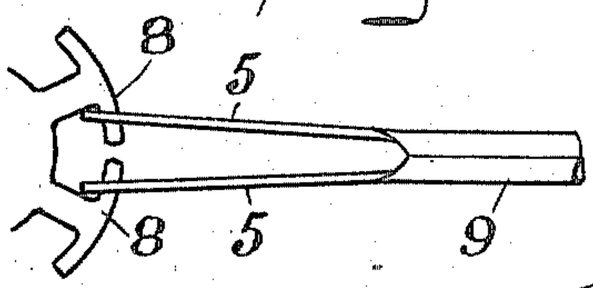


Fig. 7.



WITNESSES:

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LEWIS H. CARTER, OF ANSONIA, CONNECTICUT.

UMBRELLA-FRAME.

947,790. Specification of Letters Patent. **Patented Feb. 1, 1910.**

Application filed March 25, 1909. Serial No. 485,612.

To all whom it may concern:

Be it known that I, LEWIS H. CARTER, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Umbrella-Frames; 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.

My invention relates to certain improvements in umbrella frames, and has for its object to greatly facilitate the attaching of the ribs and braces to the elements that are immediately associated with the rod, and with these ends in view my invention consists in the combination and arrangement of parts hereinafter fully described and then particularly pointed out in the claim which concludes this description.

In the accompanying drawing Figure 1 is an elevation partly in section illustrating the manner in which my improvement is carried out—Fig. 2 a plan view of the same, but showing only one rib attached—Fig. 3 a bottom view showing the manner in which the braces are attached—Fig. 4 a detail broken view of one of the ribs or braces—Fig. 5 a view similar to Fig. 4, but showing a modified form of my improvement—Fig. 6 a detail broken elevation showing a still further modification of my improvement, and Fig. 7 a broken detail view illustrating the manner in which the modifications shown at Fig. 5 is attached in position.

Similar characters of reference denote like parts in the several figures of the drawing.

1 is the rod of an umbrella, and 2 is a crown plate rigidly secured to the top portion of the rod and having radial T-shaped projections 3.

4 are the ribs whose inner extremities terminate in twin fingers 5 that are spring tempered and have perforations *a* in their sides.

6 is the runner loose on the rod 1 and carrying at its upper end a disk 7 which has radial T-shaped projections 8.

9 are the braces whose inner ends terminate in twin fingers 10 that are spring tempered, and have perforations *b* in their sides.

In attaching the ribs and braces to the plate 2 and disk 7 respectively, the fingers 5, 10, are spread against their resiliency so as to embrace the T-shaped projections 3, 8, so that, when the fingers are released, the lateral portions of the projections will engage with the fingers in the perforations and thereby cause said ribs and braces to be held in proper position. The braces are attached to the ribs in any ordinary manner, and in the present instance I have shown clips 11 secured to the ribs while the outer ends of the braces are pivoted to the clips themselves.

In the construction shown at Figs. 1, 2, and 3, the normal position of the spring tempered fingers is substantially parallel as shown in detail at Fig. 4, so that these fingers must be spread in order to attach them to the parts carried by the umbrella arm, but it will be clear that these fingers may be tempered in a distended position, as shown at Fig. 5, in which instance they are attached to either the plate 2 or disk 8 by simply forcing them together and inserting them between the T-shaped projections so that when they spring apart they will engage with the lateral portions of said projections as shown at Fig. 7.

If desired, the ribs or braces may be made as shown at Fig. 6, in which a solid rod 12 is flattened at the end so as to form a tongue 13, and twin fingers 14 spring tempered may be secured to said tongue by riveting or in any other suitable manner, and I therefore do not wish to be limited to any particular manner of forming these spring fingers.

My invention makes the assembly and repairing of an umbrella frame exceedingly simple and the structure when completed is very economical and operates with great facility.

I have shown both the ribs and the braces provided with the resilient fingers, but it will of course be understood that the use of these fingers may be limited to either the ribs or the braces, and I do not therefore

wish to confine my invention to an umbrella frame in which both the ribs and the braces are equipped with these fingers.

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

An umbrella frame, comprising in combination with the rod carrying elements having radial T-shaped projections, ribs and braces which terminate in tempered resilient fingers, formed by cutting away said ribs and braces at their ends, said fingers being adapted to snap over adjacent arms of said projections and be held of their own resilience.

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

LEWIS H. CARTER.

Witnesses:
THOMAS H. GRADY,
P. J. MAHONEY.