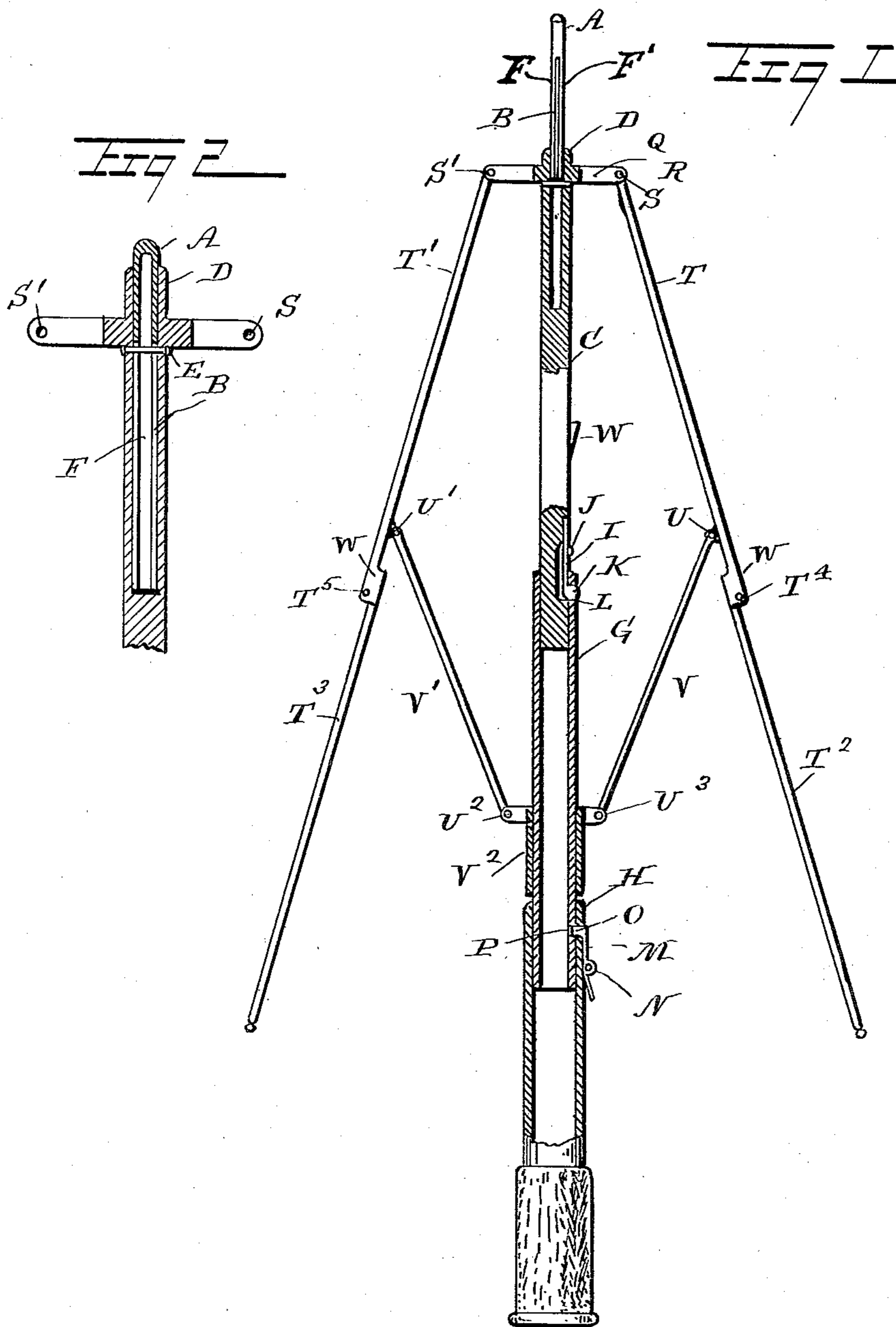


No. 894,413.

PATENTED JULY 28, 1908.

C. R. WHEELER.
FOLDING UMBRELLA.
APPLICATION FILED APR. 10, 1907.

2 SHEETS—SHEET 1.



WITNESSES:
H. H. Ward,
Witness.

INVENTOR
Charles R. Wheeler
BY *J. N. Gilbert*
ATTORNEY

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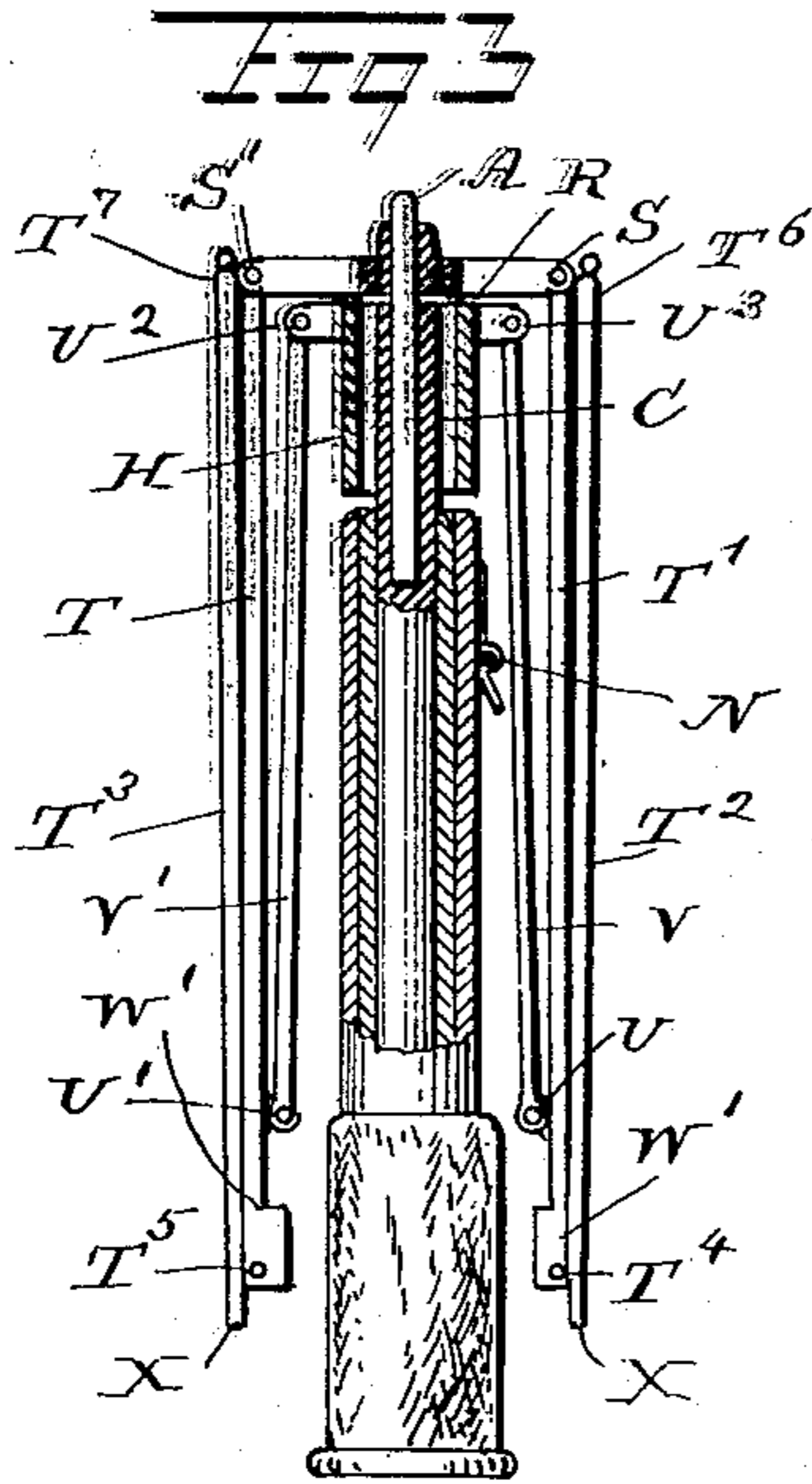
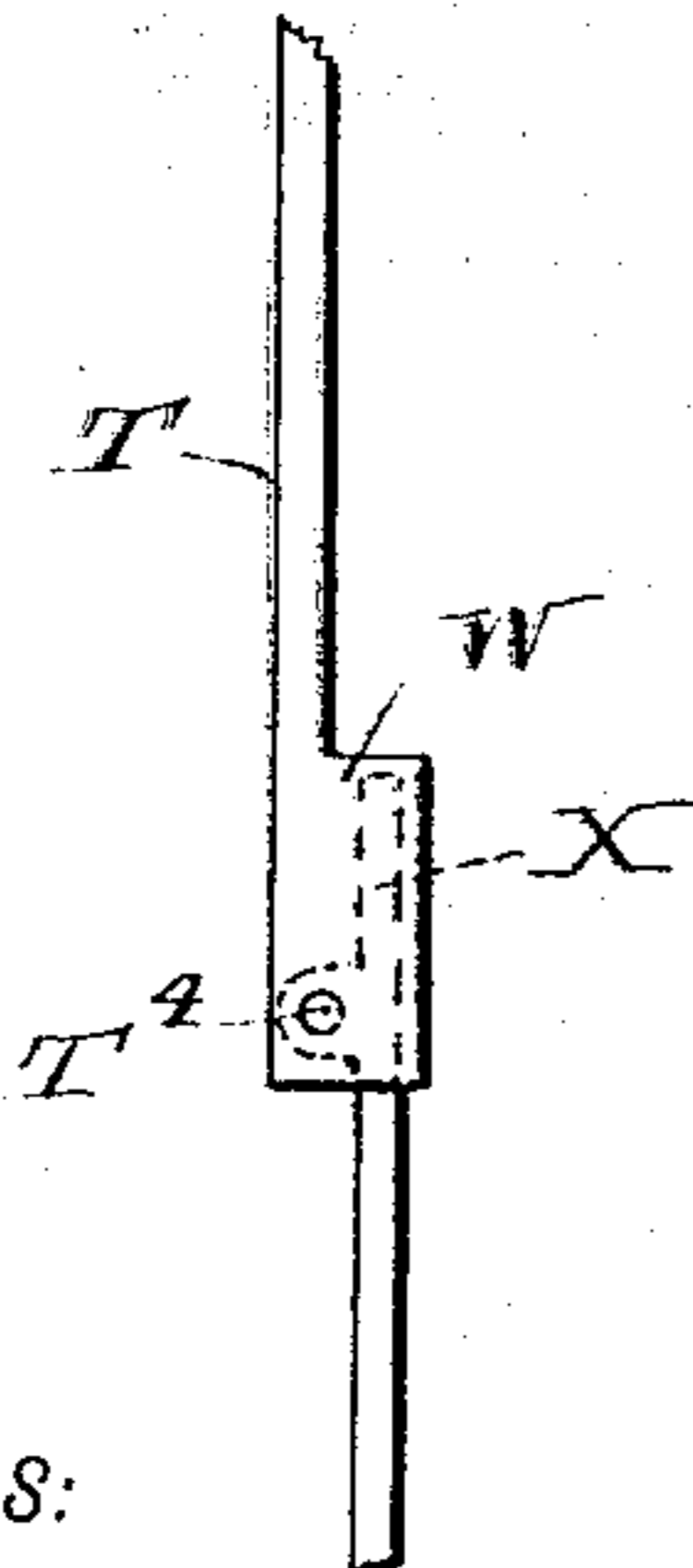


Fig 3



WITNESSES:

J. H. Ward
W. H. Edwards

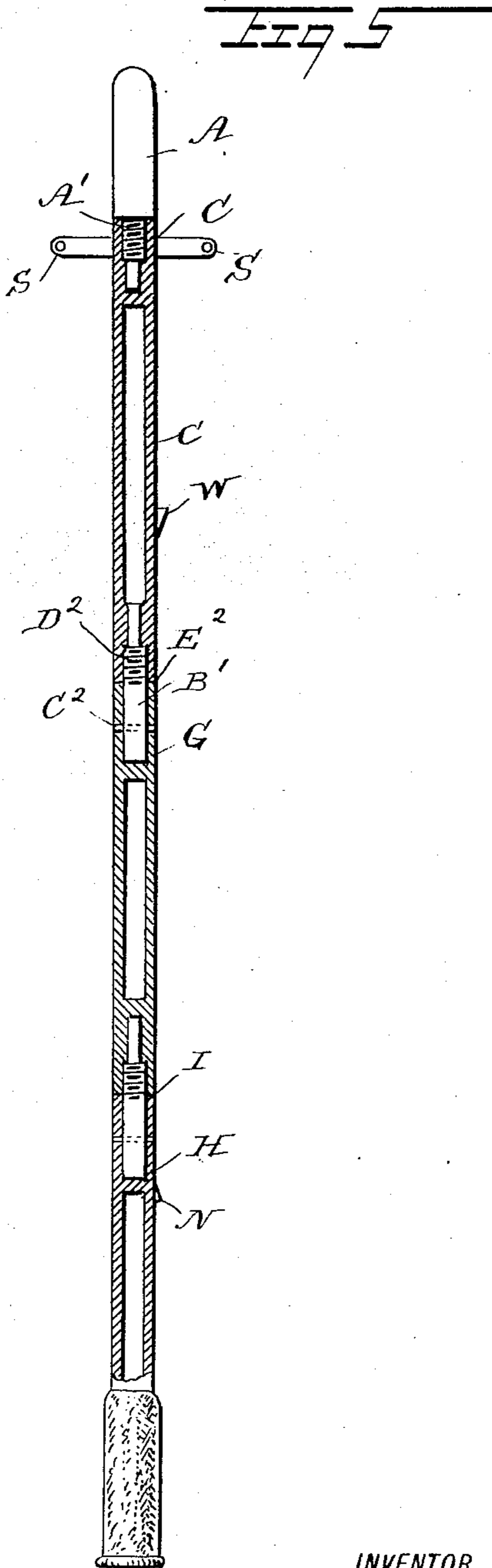


Fig 5

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UNITED STATES PATENT OFFICE.

CHARLES R. WHEELER, OF GREENE, NEW YORK.

FOLDING UMBRELLA.

No. 894,413.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed April 10, 1907. Serial No. 367,310.

To all whom it may concern:

Be it known that I, CHARLES R. WHEELER, of the village of Greene, in the county of Chenango, in the State of New York, photographer, have invented certain new and useful Improvements in Folding Umbrellas; and I do hereby declare that the following is a full, clear, and exact description of the same.

10 This invention relates to improvements in umbrellas and more particularly to what are commonly known as folding umbrellas.

The invention comprises a novel series of hinged ribs hinged upon a central shaft or handle, each rib having a hinged joint and thus enabling the rib to be folded back or unfolded, and which when folded, the lower jointed section folds over back upon the upper section. The central handle or shaft is 20 composed of a series of tubes, with telescopic connections—one sliding over the other and in this manner the handle is shut up or shortened to less than half its length when extended. The ordinary catches or projections 25 hold the telescopic sections in position; the handle is further composed of an adjustable extending tip, which slides within the upper portion of the handle and is frictionally adjusted in the same—the interior of the upper 30 portion of the handle being so constructed at the upper end as to permit the adjustable tip to be withdrawn and extended and there rigidly held in position or again closed down within the handle, at the pleasure of the operator or person using the umbrella. Thus 35 the umbrella, or parasol can be reduced to the smallest possible size. The extension ribs are further made rigid by the aid of clutches or receivers extending from the side 40 of the upper section which receive the extended end of the hinged member when open and hold the same rigidly extended.

The object of my invention is to provide a simple and easily constructed folding umbrella or parasol frame which will fold up and 45 shut up into less than half its ordinary size when open, and thus enable the same to be carried in a bag, suit case or trunk with great convenience to the traveler.

50 In the construction of the handle I may also use instead of the sliding tubes, a solid head containing a threaded socket or opening and into which a fitted threaded extension of the next handle may enter and be united by 55 a screw connection and thus is held rigidly

forming a handle composed of screwed joints instead of telescopic joints.

With this and other objects in view the invention comprises certain novel constructions, combinations and arrangements of 60 parts as will be hereinafter fully described and claimed.

Figure 1 is a central vertical section of the umbrella according to my invention; the umbrella is shown partly closed, the silk or covering being removed for clearness of illustration; Fig. 2 is a broken sectional view of the upper portion of the umbrella. Fig. 3 shows the umbrella in a collapsed position; Fig. 4 is an enlarged detail of one of the ribs; Fig. 5 is 70 a longitudinal sectional view of a modified form of my invention.

Similar letters refer to similar parts throughout the several views.

The extension tip A is positioned as shown 75 in Fig. 2 having the slot B; it enters tube C at the point D; across the hollow tube C is a rivet or pin E; when closed down the slotted top A extends down over the pin E as shown in Fig. 2 and Fig. 3. The arms F and 80 F' of tube A extend down on either side of the pin or rivet E. When withdrawn or extended as in Fig. 1, the tip is sustained within the tube C and twisted or partially rotated so that the slot B does not meet the 85 pin E and thus the tip is held supported in the extended position as shown in Fig. 1, supported by the pin E and the sides of the tube D, as shown in Fig. 1. When the tip A is closed down within the tube as shown in 90 Figs. 2 and 3, it forms a telescopic position there shown. Thus the tip A can be extended out from the tube forming the handle of the umbrella or shut within the tube and thus the handle is shortened. The tube C 95 slides within the tube G and tube G within tube H which latter forms the handle portion of the umbrella, which is extended or lengthened by such telescopic movement and connection. 100

Within tube C is inserted a small catch-lever I fulcrumed at the point J and tube G is drawn out until the projecting knob K meets and enters the slot in tube G at the point L and by this action holds tube G in 105 a rigid telescopic connection with tube C. On tube H is mounted the catch-lever M fulcrumed at the point N and tube H is extended until the projection O in the catch-lever N meets the slot P in tube G when it 110

enters said slot and tube H is thus held in rigid telescopic connection with tube G, thus the handle is extended to its full length as shown in Fig. 1. On tube C at the upper 5 end is the circular notch R having at its outer edge at points S and S' hinge connections with the ribs T and T' as shown in Figs. 1, 2, 3, and 5. On ribs T at the points U and U' are hinge connections with ordinary umbrella braces V and V' as shown in 10 Fig. 1, having hinge connections at points U² and U³ with the runner V². About mid-length of the tube section C, is mounted a catch W.

15 When the umbrella is opened and the cover held in a rigid position as ordinarily held when in use, the runner V² is extended along tube C until its lower edge is engaged against the catch W. When the umbrella is 20 to be closed and folded up or placed in a folded position the runner V² is pushed up past tube G and along tube C until it reaches and rests against the notch R as shown in Fig. 3. The folding extensions of 25 the ribs T² and T³ fulcrumed at the points T⁴ and T⁵ are then turned back until their outer ends rest against the notch R, at the points T⁶ and T⁷ as shown in Fig. 3. The braces V and V' are carried upward with 30 handle-ring V² until they rest against notch R as shown in Fig. 3. Ribs T and T' hinged at the point S and S' are then brought down in a perpendicular position on the line with the handle of the umbrella as 35 shown in Fig. 3. The outer ends of ribs T and T' are provided with curved lugs or ears W and W' as shown in Figs. 1, 3, and 4. The outer rib sections T² and T³ are hinged at the points T⁴ and T⁵ and have the extended 40 tongues X as shown in Fig. 3, extending beyond T⁴, which, when the extensions T² and T³ are extended, the extension X rests in the pocket W formed by the outward curved portion of T and T' as shown in Figs. 1 and 4 45 which materially aids in making a rigid connection at the points T⁴ and T⁵ when the ribs are in an extended position. I elect also to form the rod of the umbrella in the manner shown in Fig. 5, by means of screw connections instead of telescopic connections as be- 50 fore described. In tube C at the point A',

are cut screw-threads and the tip A has a threaded screw which fits into tube C and forms a screw connection at points A', as shown in Fig. 5. In tube G is inserted a 55 plug B', held in place by the rivet C² and which has a threaded extension D². In the lower end of tube C are cut threads and the threaded extension D² is thus connected by this screw connection with tube C at the 60 points E², as shown in Fig. 5. Tube H has a similar connection with tube G at the points I as shown in Fig. 5, and thus the rod of the umbrella is formed of four connecting parts 65 forming screw-connections with each other as shown in Fig. 5. Tube C in Fig. 5 has the lever-catch along this extended handle. The handle-ring V² described in Fig. 1, slides back and forth to its different positions as the 70 umbrella is opened or closed.

Having thus described my invention what I claim as new and for which I desire Letters Patent is as follows:—

An umbrella comprising a sectional staff made up of telescopic sections and held ex- 75 tended by means of spring latches, and a notch and runner on the same, ribs connected at one end to the notch and each formed in two sections the upper rib sections being piv- 80 oted to the notch, braces connected between the runner and the upper rib sections, spaced wings or lugs on the underside at the ends of the upper rib sections to form pockets, the lower rib sections being pivoted to the end of the upper rib sections and having straight 85 portions extending beyond the point of pivotal connection to engage in the pockets in the upper rib sections, the lower rib sections adapted to fold up over the outside of the upper sections the outer portion of the staff being 90 hollow, a tip adapted to be housed therein, a transverse pin extending through said hollow outer staff section and a longitudinal slot in the tip to fit over said transverse pin, the pin adapted to support the base of the tip 95 when the same is withdrawn.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CHARLES R. WHEELER.

Witnesses:

GEO. W. LENDERSON,
MARY CLARK.