

No. 661,366.

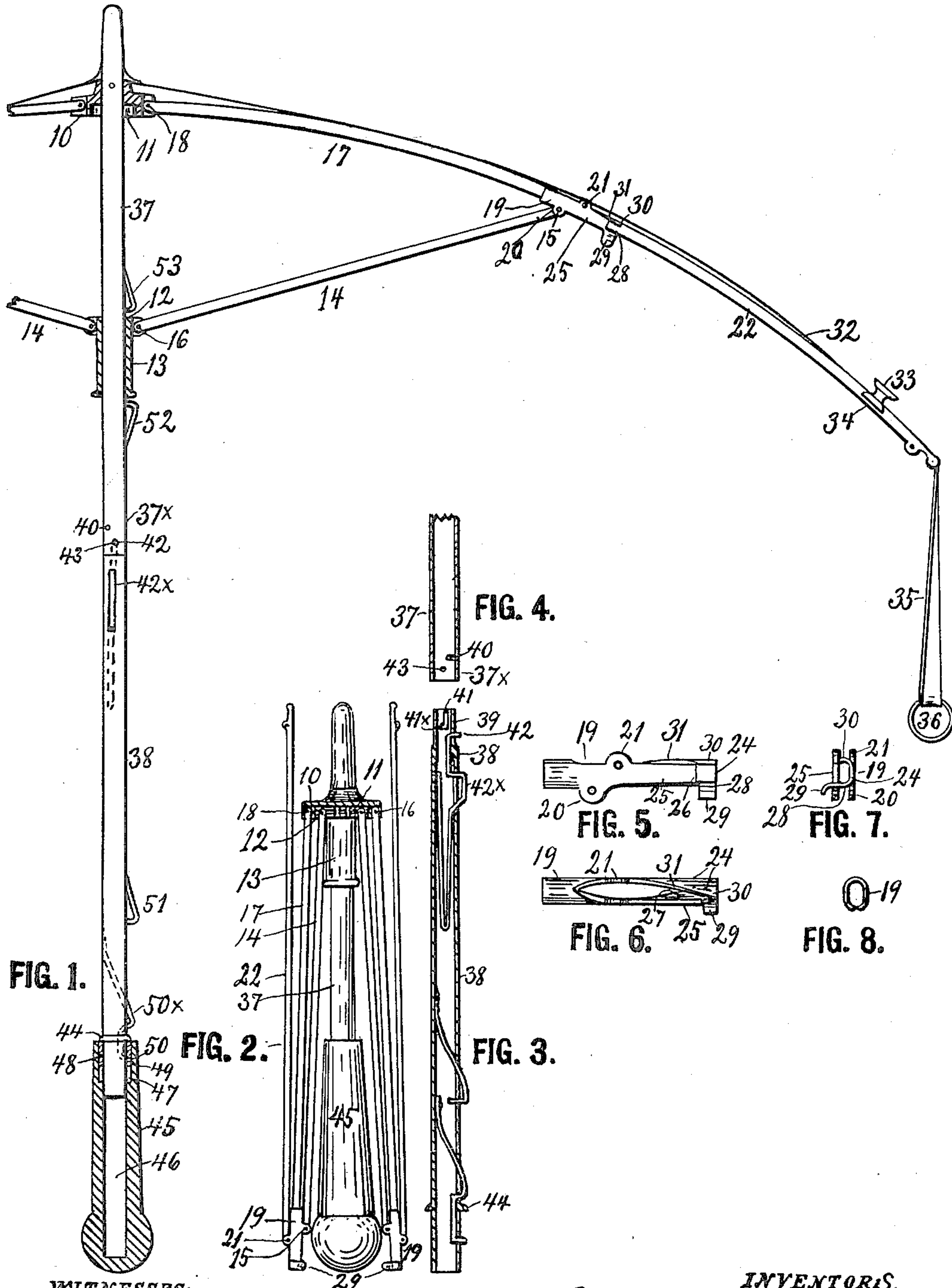
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O. CARLSON & O. GARDEEN.

FOLDING UMBRELLA.

(Application filed Feb. 2, 1900.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

OTTO CARLSON AND OSCAR GARDEEN, OF ST. PAUL, MINNESOTA.

## FOLDING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 661,366, dated November 6, 1900.

Application filed February 2, 1900. Serial No. 3,716. (No model.)

*To all whom it may concern:*

Be it known that we, OTTO CARLSON and OSCAR GARDEEN, citizens of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Folding Umbrellas; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in umbrellas and parasols of the class adapted to be folded so as to be carried in a valise or in the pocket, stored away in trunks, &c.

The invention will be fully understood by reference to the accompanying drawings, in which—

Figure 1 is a substantially central vertical section through the umbrella in its opened position, only the stick, which is tubular, is not in section. Fig. 2 is the framework of the umbrella fully folded, only the lower stick-section is removed and shown as Fig. 3. Fig. 3 is the lower stick-section in central longitudinal section. Fig. 4 is a sectional view of the lower portion of the upper stick-section. Fig. 5 is a detail side view of the piece forming the main rib-joint. Fig. 6 is a top view, Fig. 7 a right-hand end view, and Fig. 8 a left-hand end view of Fig. 5.

Referring to the drawings by reference-numerals, 10 is the top collar, usually called the "top notch" of the umbrella. This is provided in its under side with a cavity or recess 11 for the upwardly-sliding runner 13 to enter with its head 12, which is necessary in making the umbrella of ordinary stock used by umbrella-makers, and in which it is the rule to make the stretcher 14 just the same length between the pivots 15 and 16 as the upper rib-section is between the pivots 15 and 18.

At the lower end of the rib-section 17 we secure the joint-piece 19, which, as shown in Figs. 5 to 8, is formed with the lower lips 20, to which the stretcher 14 is pivoted, and the upper lips 21, between which the upper end of the lower rib-section 22 is pivoted. As best shown in Fig. 6, the main portion of the

joint-piece 19 is bifurcated into two spring-arms 24 and 25, of which the latter reaches to the point 26 (though it may be as long as the other arm) and is plain or may have its lower edge bent inward, as at 27, to help support the folding rib-section 22. The arm 24 is formed with the rib-supporting hook 28, the end of which is bent downward to serve as a thumb-catch 29 in springing the arm 24 sideways to allow the section 22 to pass upward by the upper hook 30 when the rib is to be folded, as in Fig. 2. The upper edge of the arm 24 is formed into a diagonal cam 31, against which the lower rib-section acts as a wedge, forcing the arms apart until the rib passes downward past the hook 30 and lands upon the hooks 28 and 27, and the arms close in again to their normal position.

The umbrella-cover 32 is provided with an external button 33 and an internal button 34, so that the tying-strap 35 may have its ring 36 placed on either button and tie the umbrella either in the position shown in Fig. 2 or in the regular way ordinary umbrellas are tied by such band and used as a walking-stick. The "stick" (so called here to distinguish it from the handle proper, though the stick is also often called the "handle") is made in two separable sections 37 and 38, joined together by pushing the reduced end 39 of the lower section into the lower end 37<sup>x</sup> of the upper section until the pin 40 in the upper section reaches the bottom of the L-shaped notch 41, when the lower section is twisted or turned, so that the pin engages the horizontal portion 41<sup>x</sup> of the notch and the spring-catch 42 engages the aperture 43 in the upper section. The lower end of the section 38 has a collar 44 to limit its insertion into the handle 45, which is hollow, as shown at 46. Near the upper end of the handle is an annular recess 47, which may be produced by securing a ring 48 in an enlargement of the opening 46 in the handle. Below this ring or in a notch 49 in its lower edge or in any suitable indenture inside the handle engages the catching end or hook 50 of the thumb-catch 50<sup>x</sup>, so that the handle may be detached and pushed to its bottom upon the lower end of the upper stick-section in fully folding the umbrella, as in Fig. 2.

51 is the regular thumb-catch, holding the



runner locked when the umbrella is folded in the ordinary way, (not shown,) and 52 is the regular catch used on this and all umbrellas for holding the runner elevated when the umbrella is in use.

53 is a thumb-catch or spring-latch limiting the upward movement of the runner until the umbrella is to be fully folded. Then this latch is depressed to let the runner pass upward over it.

From the above description the construction and operation will be fairly, if not fully, understood. We will add, however, that in folding the umbrella entirely, as in Fig. 2, the stick-section 38, being of the same length as the folded umbrella, is placed outside and tied to it, as if Figs. 2 and 3 were squeezed together and tied or forced into a narrow bag used for that purpose. It will also be understood that in raising the umbrella-ribs by the raisers and runner the rib-sections 22 force their way down between the arms 24 and 25. Only when said rib-sections are to be folded upward, as in Fig. 2, is it necessary to touch the catches 29 by the operator's fingers. The

object in having the notch 41 L-shaped is to prevent accidental separation of the stick-section by the merest touch on the thumb-catch 42 42<sup>x</sup>.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A folding umbrella having the rib-joint piece 19 secured on the outer end of the upper rib-section and having the stretcher and the lower rib-section pivoted to it, said joint-piece also having the two arms 24 and 25, one of which is formed with the cam edge 31 and hook 30 at its upper edge, and the supporting-hook 28 and finger-catch 29 at its lower edge, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

OTTO CARLSON.  
OSCAR GARDEEN.

Witnesses:

A. M. CARLSON,  
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