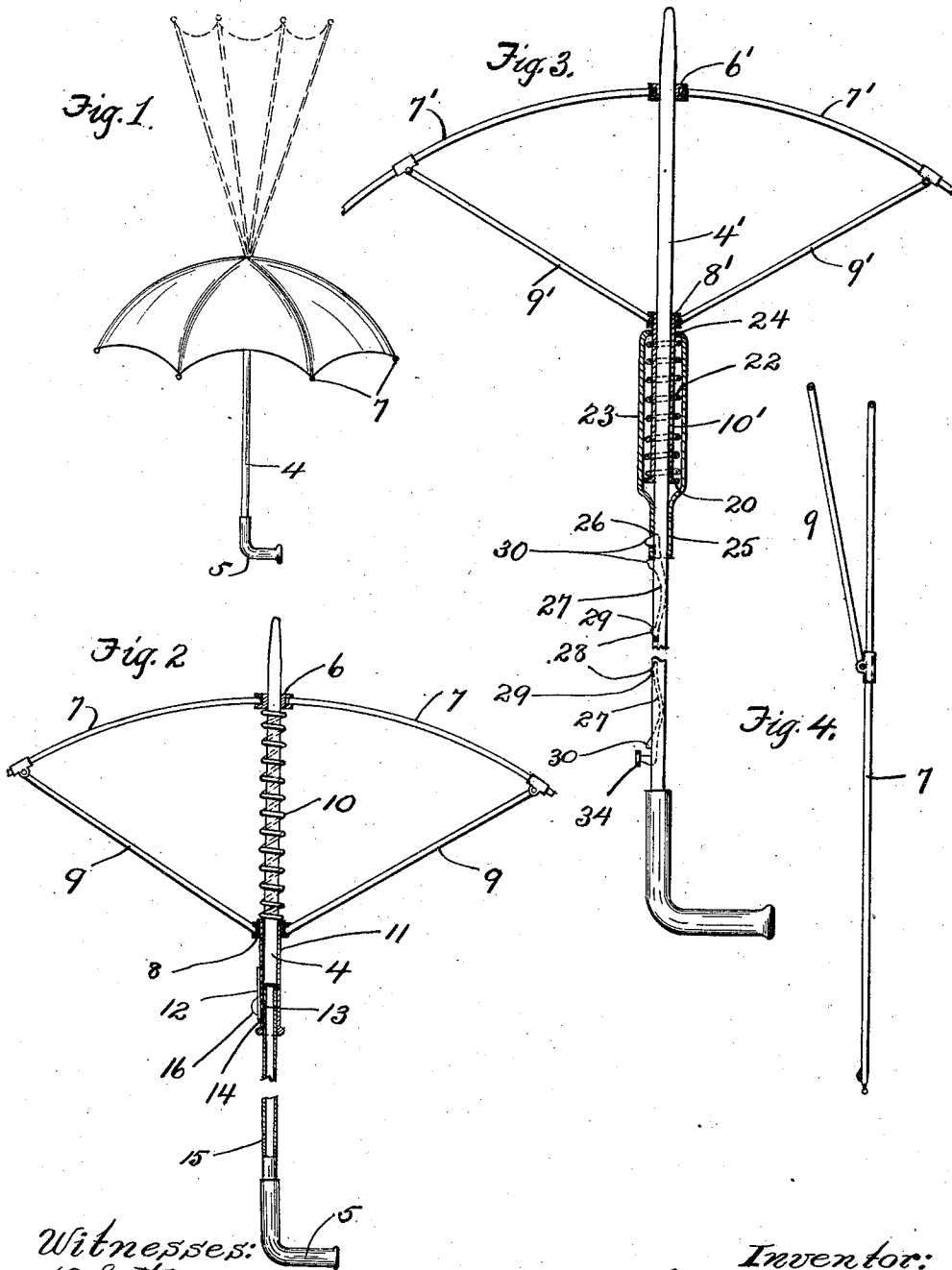


J. T. WOLFE.
WINDPROOF UMBRELLA.

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UNITED STATES PATENT OFFICE.

JAMES T. WOLFE, OF CHICAGO, ILLINOIS.

WINDPROOF UMBRELLA.

986,532.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES T. WOLFE, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Windproof Umbrellas; and I 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 pertains to make and use the same.

This invention relates to new and useful improvements in wind proof umbrellas.

The object of this invention is to provide an umbrella having such a relative arrangement of ribs and stretcher rods that the umbrella frame may be reversed or turned inside out without straining or breaking any of the parts thereof.

My invention, therefore, consists, primarily, in securing each stretcher rod to a rib at such a point that the length of the portion of the rib between the point at which the stretcher rod is secured thereto and the stationary ring or notch will be less than the length of the stretcher rod.

My invention, also, consists in the features of construction and combination of parts as described in the specification, pointed out in the claim and illustrated in the accompanying drawings.

In the accompanying drawings Figure 1 is a view showing an umbrella embodying my invention, in its normal open position, and showing in dotted lines the position assumed when the frame is reversed or turned inside out. Fig. 2 is a central section of same, on an enlarged scale. Fig. 3 is a similar view showing a modified form of the umbrella. Fig. 4 is a view showing a single rib with a stretcher rod secured thereto.

In the simpler embodiment of my invention, as shown in Fig. 2, 4 represents the rod of the umbrella which is of the usual construction, being preferably formed from a hollow tube of suitable diameter and is provided with any suitable handle 5. At the upper end of the rod 4 is secured, in the usual manner, a notcher ring 6 to which the ribs 7 are secured in the usual manner. On the rod 4 is arranged a runner 8 so as to slide freely thereon. To the runner 8 are secured the lower ends of the stretcher rods 9 in the usual manner. The upper ends of the stretcher rods 9 are secured to the ribs 7 at

such a point that the portion of each rib between the stationary notcher ring and the point at which a stretcher rod is attached thereto is from half of an inch to possibly an inch and a half shorter than the length of the stretcher rod. It will be seen therefore that this arrangement will readily permit the ribs to be completely reversed so that the stretcher rods may be on the outside of the said ribs while there will be no change in the point of connection of the stretcher rods with the ribs.

In order to hold the umbrella in its normal open position under ordinary wind pressure while allowing it to be reversed without injury to the frame under abnormal wind pressure, a coil spring 10 is arranged on the outside of the rod 4 between the notcher ring 6 and the runner 8.

In Fig. 2 is also shown a new form of catch which is constructed as follows. A sleeve 11 is formed integral with the runner 8 and on the outside thereof is secured a small spring plate 12 which is provided on its inner face with a projection or stud 13 which extends through an opening in the sleeve 11 and when the umbrella is in its normal open position the said stud 13 extends into a small opening 14 formed in the rod 4, thereby preventing the umbrella from closing down, and when the umbrella is closed the said stud is arranged to enter an opening 15 in the rod 4 so as to hold the umbrella closed. The spring plate 12 is preferably provided with a small knob or button 16.

In Fig. 3 I have shown a modified construction of my umbrella in which the frame work of the umbrella including the rods indicated by 4', the ribs indicated by 7', the notcher ring indicated by 6', the runner indicated by 8' and the stretcher rods indicated by 9', are all arranged as heretofore described, the modification consisting in the means for holding it open or shut under ordinary conditions and for holding it against reversal under normal wind pressure. A sleeve 10' is preferably formed integral with the runner 8' and at its lower end said sleeve is provided with an annular flange 20. Around the sleeve 10' is arranged a coil spring 22 and on the outside thereof and inclosing the said sleeve 10' and the coil spring 22 is arranged a sleeve 23 which is provided at its upper end with an annular flange 24 which

rests on the upper end of said spring 22. The sleeve 23 is provided with a restricted lower portion, shown at 25, which closely engages the rod of the umbrella, and near the lower end thereof is formed an opening 26. In order to hold the umbrella against collapse when in its normal open position, a latch is provided consisting of a curved resilient strip or rod 27 which is provided at its lower end with a projection 28 which is seated in an opening 29 in the rod 4 and at its upper end is provided with a double jaw 30, the upper member of which is adapted to pass through the opening 26 in the portion 25 of the sleeve 23. It will therefore be seen that the sleeve 23 is held against movement either up or down on the rod 4' and therefore in order to close the umbrella it is necessary to press back the latch so as to withdraw the jaws out of contact with the said sleeve 23. It will also be seen that as the sleeve 23 is held against upward movement before the umbrella can be reversed it will be necessary for the inner sleeve 10' to move up on the rod 4' against the tension of the spring 22 and therefore the umbrella will be held against reversal under ordinary wind pressure. The latch for holding the umbrella in its closed position is in all respects similar to the latch heretofore described, with the exception that it is arranged in the reversed position and is pref-

erably provided with a small operating button 34.

What I claim is,—

In an umbrella, the combination of a rod, a cover frame comprising a series of ribs secured at their upper ends to said rod, a runner, stretcher rods secured at their lower ends to said runner and at their upper ends to said ribs at such a point that the portion of the ribs above the point at which the stretcher rods are attached is less than the length of the said stretcher rods, a sleeve connected with said runner and provided at its lower end with a flange, a coil spring arranged around said sleeve, an outer sleeve arranged around said coil spring and provided with a flange arranged to rest on the upper end of said coil spring, means arranged on said rod for locking said sleeve against movement when the umbrella is in its closed position and means for locking said sleeve against movement when the umbrella is in its open position while leaving the inner sleeve free to slide on said rod, for the purpose set forth.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

JAMES T. WOLFE.

Witnesses:

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