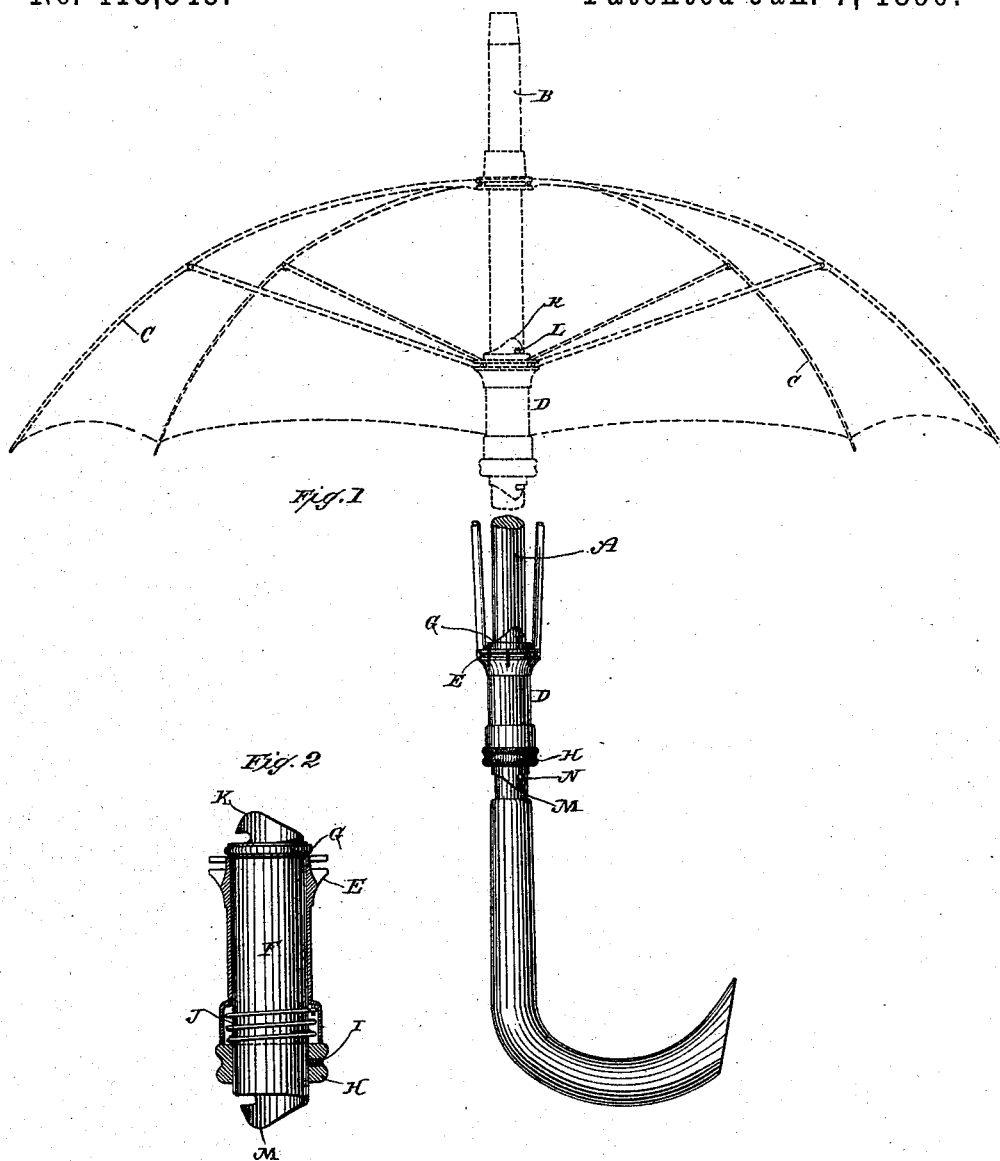


(No Model.)

C. H. KNUBEL.
UMBRELLA.

No. 418,845.

Patented Jan. 7, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES H. KNUBEL, OF NEW YORK, N. Y.

UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 418,845, dated January 7, 1890.

Application filed April 5, 1889. Serial No. 306,134. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. KNUBEL, of the city, county, and State of New York, have invented certain new and useful Improvements in Umbrellas, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The present invention relates to an improved umbrella-runner—that is, to the tubular slide to which the inner ends of the rib-braces are pivoted and which slides up and down on the umbrella-stick as the umbrella is opened or closed.

The invention relates particularly to that kind of a runner that consists of an outer sleeve having an inner tube, which is circularly movable in the sleeve and is held to normal position by a spring arranged between them, the sleeve being pivoted to the braces of the canopy and the tube bearing a catch adapted to engage a projection or like device on the stick.

The object of the invention is to construct such a runner so that it will serve to hold the umbrella closed, and with the ribs close against the stick, as well as to hold its canopy expanded, and also so that the runner shall be automatic in its action—that is, will engage with projections on the stick by the act of opening or closing the umbrella and without necessitating special manipulation of the runner.

The improvements will now be described in detail, and those regarded as new will be specially set forth in the claims to follow the description.

Referring to the drawings, Figure 1 represents an umbrella-stick with a runner embodying my invention applied to it. Fig. 2 is a detail view of the runner in partial section—that is, the outer cylindrical part of the device is in central longitudinal section, while the inner tube is shown in full.

Referring to these views in detail, A represents the umbrella-stick, which may be of any desired form and construction. B is the tip-portion thereof, and C the ribs which support and carry the canopy.

D is the runner, which consists of a cylindrical sleeve having a recessed hub E, to which the braces of the ribs are pivoted.

F is a tube of substantially the same internal size as the stick A, and is arranged within the runner and loosely held so as to be circularly movable therein by the head G and the knurled ring-knob H. This knob, preferably, is removably attached to the tube by a screw or pin I. The rear end of the sleeve is expanded, so as to form a recess or annular space between the sleeve and its inner tube. In this annular space is arranged the spiral spring J, which is wrapped around the tube and has one of its ends secured to the outer sleeve, while its other end is secured to the inner tube. By this arrangement of the spring the tube is normally held in one position relative to the sleeve, yet is capable of being slightly turned in the sleeve by applying the thumb and finger to the knob H, which projects slightly beyond the outer surface of the sleeve for this purpose.

K is a hook formed in the cylindrical wall of the upper end of the inner tube. The point of this hook is beveled, as shown. L is a pin or similar projection secured to the stick of the umbrella and arranged in the path of the hook K, so that as the runner is pushed upwardly as the ribs are being raised and the canopy spread the beveled edge of the hook will strike the pin and be pushed circularly to one side until it snaps over the pin by the action of the spiral spring. This will lock the runner in its upper position and hold the canopy expanded. To lower the canopy the knurled knob will be seized between the thumb and finger and turned to the left, which releases the hook from the retaining-pin and permits the runner to be slid down the stick. At the lower end of the runner is a hook M, similar in every way to the hook K, and on the umbrella-stick is a second projection-pin N, over which this hook catches as the runner is brought to its lowermost position on the stick. This is for the purpose of holding the runner at its lowermost position when the umbrella is not in use, and thereby keeping the ribs and canopy folded against the stick and preventing them being accidentally opened.

It is to be noted that the catch of the hook K is above the upper end of the outer sleeve. This I regard as important, for usually the hub E and the inner ends of the braces are

protected or covered by a fabric—leather or
other like material—which would be caught
by the hook or pin L if such hook or pin were
not arranged above the same. Furthermore,
5 the swelling of the stick will cause the pins
L and N to project more or less, and if they
were arranged to pass under or through any
of the parts of the sleeve or tube such dis-
placement of them would often prevent the
10 runner engaging them.

What is claimed as new is—

1. In an umbrella-runner, the combination
of the outer sleeve D, the inner tube F, hav-
ing the hooks K and M, projecting beyond
15 the ends of the sleeve, and the spiral spring
J, all arranged substantially as described,

whereby the end hooks act automatically to
engage projections on the stick as the canopy
is raised or lowered.

2. The combination, with an umbrella-stick, 20
having pins L and N and the ribs and braces
of the canopy, of a runner composed of a
sleeve D, inner tube F, having hooks K and
M, projecting beyond the ends of the sleeve,
and the spring J, arranged substantially as 25
set forth, whereby the said hooks act auto-
matically to engage the pins of the stick.

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Witnesses:

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