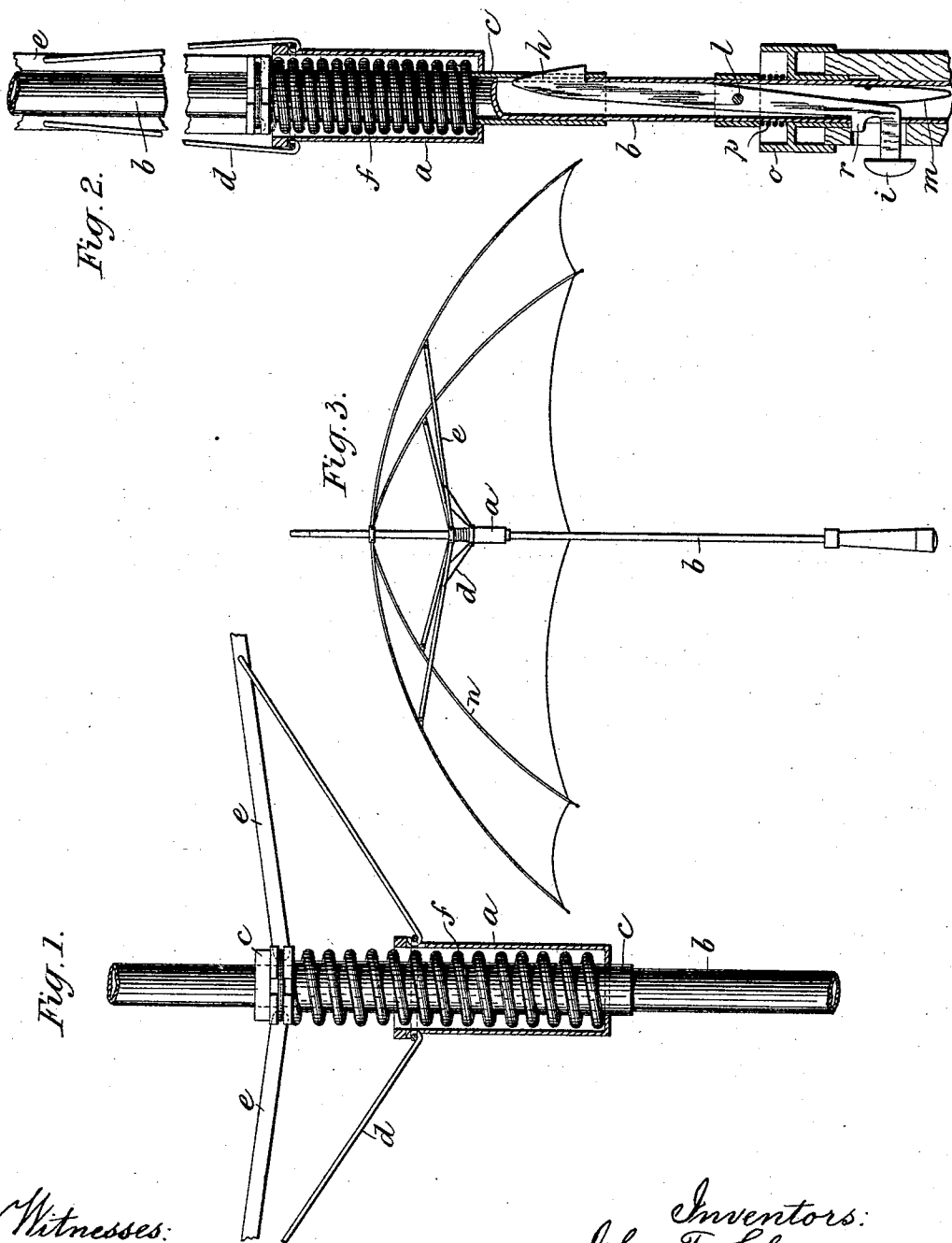


(No Model.)

J. T. & F. S. LILEY.
SELF OPENING UMBRELLA.

No. 498,665.

Patented May 30, 1893.



Witnesses:
Walter Allen
J. M. Wister

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UNITED STATES PATENT OFFICE.

JOHN THOMAS LILEY AND FREDERICK SAMUEL LILEY, OF LONDON,
ENGLAND.

SELF-OPENING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 498,665, dated May 30, 1893.

Application filed July 26, 1892. Serial No. 441,254. (No model.)

To all whom it may concern:

Be it known that we, JOHN THOMAS LILEY and FREDERICK SAMUEL LILEY, manufacturers, subjects of the Queen of Great Britain and Ireland, both of 38 Noble Street, in the city of London, England, have invented certain new and useful Improvements in Umbrellas; and we 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.

This invention for improvements in umbrellas and the like has for its object to provide an automatic self opening umbrella or the like, which shall not be more bulky, or heavier than those constructed in the usual manner and which can readily be opened by the same hand that holds it, and consists essentially in arranging a spring with its ends bearing against or secured to the runner and a sleeve sliding on the runner and connected to the stretchers by short wires; the spring is compressed or extended on closing the umbrella or the like, and opens it as soon as it is released from the catch holding it in its closed position.

In the accompanying illustrative drawings, Figures 1 and 2 are vertical sections of a part of a self opening umbrella showing the parts in the open and closed positions, respectively. Fig. 3 is a sectional elevation of the same to a reduced scale.

A sleeve *a* surrounding the stick *b* and mounted on the runner *c* is connected by short wires *d* to the stretchers *e* at a short distance from the runner *c*. One end of a short spiral spring *f* bears against the upper end of the runner *c* and its other end bears against the bottom of the sleeve *a*. The spring may be inserted under any desired degree of compression. When the runner *c* is pulled down the stick *b*, the sleeve *a* as it passes down the stick slides up the runner *c* to a slight extent,

and further compresses the spring *f*. When the runner is released, the pressure of the spiral spring *f* tends to force the sleeve *a* down the runner *c* and thus causes them both to run up the stick, and opens the umbrella.

The umbrella is retained in its closed position, by means of the spring catch *h* taking into a notch in the runner *c* in the usual manner. The catch *h* can be withdrawn by depressing the button *i* which turns the catch *h* about the pivot *l*. The spring *m* causes it to resume its normal position when the button is released. The tips of the ribs *n* may also be arranged to be retained when the umbrella is closed by a tip cap *o* against which bears one end of a spiral spring *p* tending to force the cap off the ribs. The cap is retained on the ribs by the catch *r* which is also arranged to be withdrawn on depressing the button *i*. If desired in this case the hook of the catch *h* may be dispensed with.

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

In a self opening umbrella or the like, a spring tip cap which can be forced over the tips of the ribs to keep the umbrella closed, a catch for retaining the tip cap over the said tips against the resistance of its spring and an external button connected to the catch so that by depressing the button the catch is withdrawn, the tip cap forced off the tips of the ribs and the umbrella opened, the whole substantially as described.

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

JOHN THOMAS LILEY.

FREDERICK SAMUEL LILEY.

Witnesses:

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