

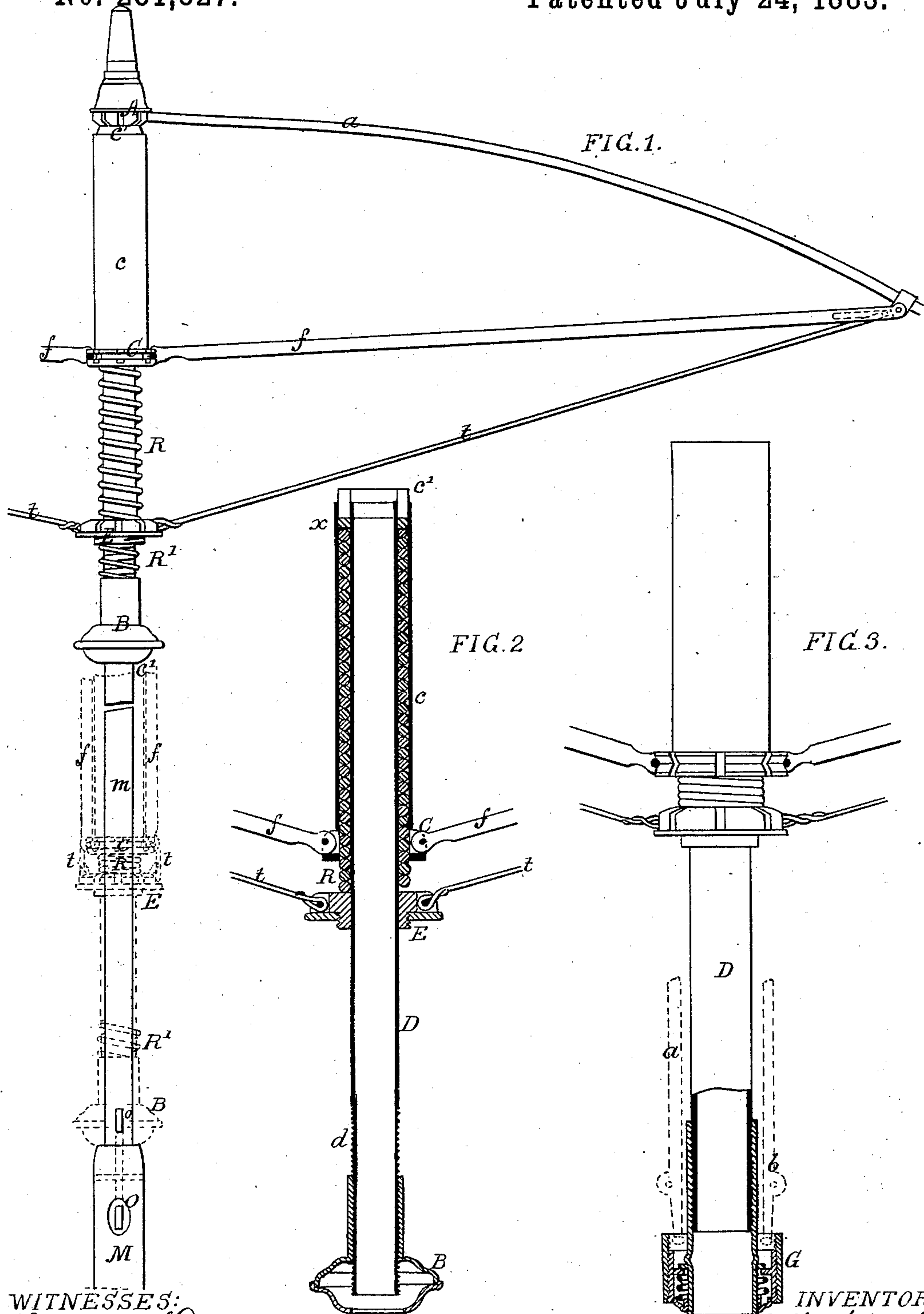
(No Model.)

H. BOLLACK & G. MAYER.

UMBRELLA.

No. 281,827.

Patented July 24, 1883.



WITNESSES:
Thomas Dugan
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UNITED STATES PATENT OFFICE.

HENRY BOLLACK AND GEORGES MAYER, OF PARIS, FRANCE.

UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 281,827, dated July 24, 1883.

Application filed January 8, 1883. (No model.) Patented in France August 19, 1882, No. 150,719, and in England October 23, 1882, No. 5,187.

To all whom it may concern:

Be it known that we, HENRY BOLLACK and GEORGES MAYER, citizens of the French Republic, residing at Paris, in the Department of the Seine, in the Republic of France, have invented a new and useful Improvement in Umbrellas, (for which we have obtained Letters Patent in France, No. 150,719, bearing date of August 19, 1882, and provisional protection in Great Britain, No. 5,187, dated October 31, 1882,) of which the following is a specification.

This invention relates to improvements in an umbrella, whereby it is made to open automatically, actuated by a spiral or helical spring, which expands or distends when it is desired to open the umbrella for use, remains compressed in the socket of the slider or runner while the umbrella is closed, and is held in this position by a kind of spring clasp or catch set in the handle, or by a suitably-arranged cup or tip-fastener with or without spring. The spiral or helical spring is confined between the upper part of the socket of the runner and a second runner, to which are attached as many tension-rods of thin metal wire as there are hollow stretchers, corresponding to the ribs receiving the cover, which is made of any suitable material. The upper part of the socket of the main slider or runner, or the lower part of the nut or collar to which the ribs are joined, is provided with a washer of india-rubber or other elastic material to deaden the shock arising from the expansion of the spiral spring, which is particularly felt upon the nut or collar of the ribs. Another spiral spring may, if desired, be placed between the second slider or runner and the piece into which penetrates the spring-catch of the handle when this catch is used, also for the purpose of deadening the shock produced by opening the umbrella.

The nature of the improvements the subject of this invention will be fully understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 represents in elevation part of an umbrella opened, the dotted lines showing it closed. Fig. 2 is a vertical section through the axis of the spring-runner, the umbrella being closed—that is to say, the spiral spring

being completely compressed; and Fig. 3 is a similar section, but showing the use of a tip-cup fastening.

A is the nut or collar, to which are attached the ribs *a*; and C is the slider or runner, to which are attached the stretchers *f*, hollow or U-shaped in section. This runner is extended in form of a socket, *c*, furnished at its upper part with an india-rubber washer, *c'*, Fig. 2, intended to deaden the shock or blow against the nut or collar when the umbrella is opened. This washer, as above stated, may be placed immediately under the collar to produce the same effect.

Within the socket *c* is placed the spiral spring R, encircling the tube D, soldered to the said socket, which spring has its fulcrum or bearings under the washer *x*, and also upon the second runner, E, to which are attached the tension-rods *t*, the outer ends of which are attached to the stretchers *f*. The lower part, *d*, of the tube D is screw-threaded on the outside to receive the piece B, into which takes the spring-catch *o*, set in the handle M.

m is the stick or rod, which may be of metal or of wood, passing through the tube D.

Upon Fig. 3 we have shown in section the tube D, the lower part of which is tapped at *d* to receive the tube *b*, which is enveloped by the tip-cup G, intended to receive the ends of the ribs *a*.

r is the spiral spring, which constantly brings back the cup G upon the ribs when the umbrella is closed, and which is compressed when the cup is drawn backward, in order that the umbrella may open of itself, actuated by the spring R.

We would here observe that a spiral spring, R, may be, if desired, placed between the bottom of the second runner, E, and the upper part of the socket of the piece B, for the purpose of lessening or deadening the shock produced in opening the umbrella.

In the position shown in dotted lines at Fig. 1 the umbrella is closed, the tension-rods *t* lying snugly within the hollow ribs *f*, and the catch *o* taking into the piece B, or the spring tip-cup keeping the whole in place, the spring R being completely compressed, as shown, Figs. 2 and 3.

By pressing upon the part *o* of the catch or

by pulling back the cup, the piece B or the ribs are released, and the spring R, in distending, causes the opening of the umbrella, the washer *c'* and the spring R deadening the shock
5 or concussion.

We do not desire to claim, broadly, the combination with an umbrella, of a spring to automatically open the umbrella; but

We claim as our invention—

10 1. The combination of the ribs and stretchers of an umbrella with a runner, C, to which the stretchers are connected, a runner, E, and tension-rods, and a spiral spring, R, interposed between the two runners, substantially
15 as set forth.

2. The combination of the ribs and stretchers of an umbrella and a sliding tube, D, with

runner C, connected to said tube, tension-rods *t*, a runner, E, free to slide on said tube, and an intermediate spring, R, substantially as and 20 for the purpose described.

3. The combination of the rib-nut, ribs, and stretchers of an umbrella with tension-rods, a sliding tube, D, carrying two runners, a spring, R, and a rubber ring, *c'*, substantially 25 as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HENRY BOLLACK.

GEORGES MAYER.

Witnesses:

ALFRED COINY,

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