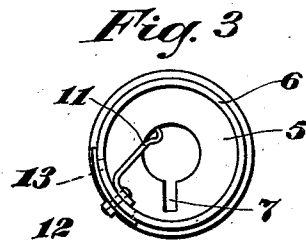
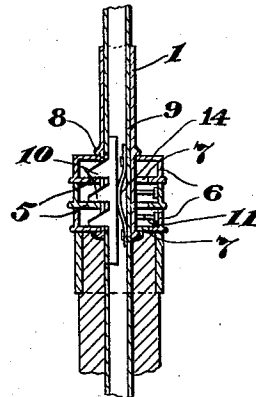
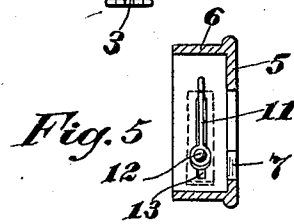
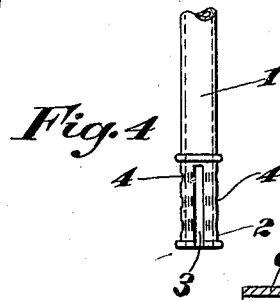
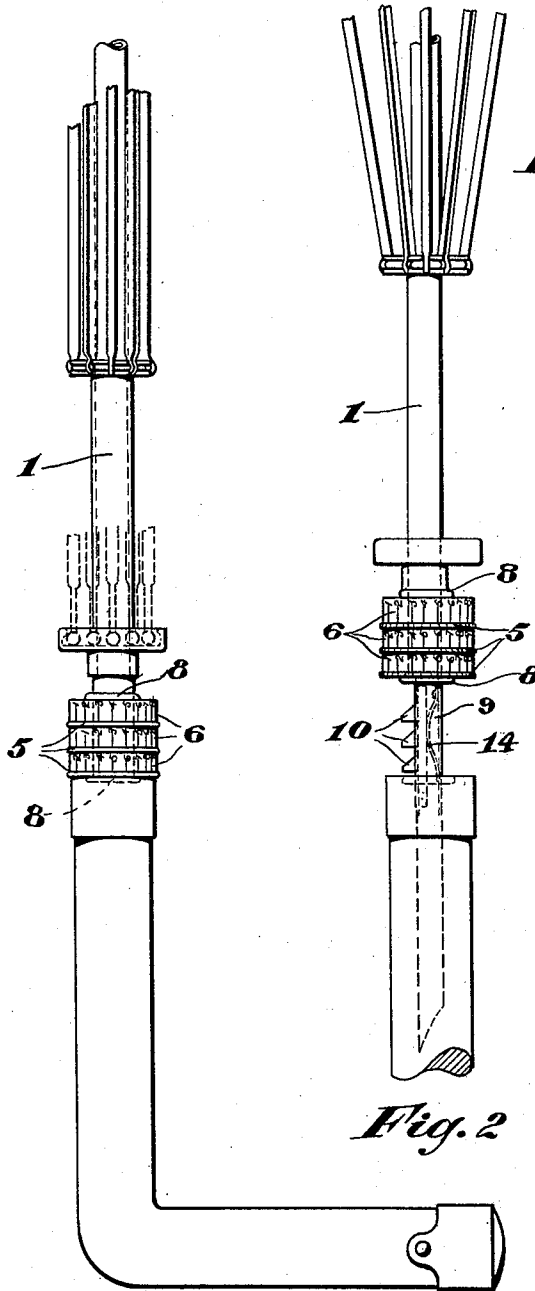


C. H. REID.
 UMBRELLA RUNNER LOCK.
 APPLICATION FILED DEC. 2, 1911.

1,055,654.

Patented Mar. 11, 1913.



Witnesses:

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Fig. 1

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UNITED STATES PATENT OFFICE.

CHARLES H. REID, OF SIMCOE, ONTARIO, CANADA.

UMBRELLA-RUNNER LOCK.

1,055,654.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed December 2, 1911. Serial No. 663,621.

To all whom it may concern:

Be it known that I, CHARLES H. REID, a subject of the King of England, residing at Simcoe, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Umbrella-Runner Locks; and I do hereby declare that the following is 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.

The invention to be hereinafter described relates to umbrellas and more particularly to runner locks for the same.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a side elevation of the device, in operative position; Fig. 2 is a similar view, in inoperative position; Fig. 3 is an enlarged, longitudinal, sectional view, showing the operation of the device; Fig. 4 is a top plan view of the ferrule, removed; Fig. 5 is an enlarged plan view of the means for changing the combination; and Fig. 6 is a front view of one of the rings or disks, removed.

Referring to the drawings in detail, 1 indicates an umbrella runner of usual and well known construction. The lower section of this runner is formed as a ferrule 2 provided with a longitudinal slot 3 and a plurality of circumferential rings of ridges or parallel ribs 4, for a purpose to be later disclosed. About this ferrule portion are rotatably mounted a plurality of disks 5 each provided with an indexed flange 6 and a radially extending slot 7. The disks 5 are so proportioned, of course, as to just fill the space between the shoulders 8 at the opposite ends of the ferrule section of the runner.

Movably mounted within the hollow staff 9 of the umbrella handle is a spring actuated dog 10 provided with one tooth for each of the disks 5. The slot 3 of the ferrule section 2 receives the dog as the runner moves toward the handle of the umbrella. On the other hand, these teeth cannot pass freely through the disks 5 but are depressed by the edges of the disks. However, as soon as the last disk has passed beyond its par-

ticular holding tooth, the dog will return to its operative position with each tooth projecting into the forward path of movement of the disk. Thus, the disks and runner will be held in lowered position, or closed.

In order to permit upward movement of the ferrule and runner to open the umbrella, it is necessary, of course, to turn or move the disks 5 so that their slots 7 will be aligned with one another and with the teeth of the dog 10, thus disengaging the disks from the dog. This is accomplished by using a combination of the numbers or other index characters on the flanges 6. In order to further facilitate the unlocking operation, click springs 11 secured to the inner walls of the flanges 6 and cooperating with the ribs or ridges of the circumferential rings 4, are provided. These springs also act in the nature of pawls to prevent reverse rotation of the disks, thus rendering knowledge of the exact combination necessary to permit a successful unlocking operation of the disks.

In order to render the combination variable, the click spring of one of the disks may be adjustably connected to its flange 6 by means of a binding screw 12 playing in a circumferential slot 13.

The usual rib tip cup may be connected to the ferrule, if desired.

It is thought that the operation and use of the invention is clear from the preceding detailed description.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination with an umbrella, a tubular umbrella staff provided with a longitudinal slot, a runner slidably mounted thereon and formed with a longitudinally slotted ferrule provided with circumferentially disposed ribs, a plurality of independently rotatable, slotted, and indexed disks mounted on said ferrule over the slot therein, a click spring secured inside each of said disks and adapted to cooperate with said ribs, and a spring actuated dog mounted within said tubular staff and adapted to be projected through the slot therein and through the slots in said disks.

2. In combination with an umbrella, a tubular umbrella staff provided with a longitudinal slot, a runner slidably mounted thereon and formed with a longitudinally slotted ferrule provided with circumferen-

tially disposed ribs, a plurality of independently rotatable, slotted, and indexed disks mounted on said ferrule over the slot therein, a click spring secured inside each
5 of said disks and adapted to coöperate with said ribs, means for adjusting one of said springs, and a dog mounted within said tubular staff and adapted to be projected through the slot therein, and means for thus
10 projecting said dog.

3. In combination with an umbrella staff, a runner movably mounted thereon and provided with a ferrule having a longitudinal slot, a spring-pressed pawl provided with a

series of teeth adapted to protrude through 15
said slot, and a series of disks independently rotatable on said ferrule, each disk being provided with a slot which is adapted to receive one of said teeth, also with means for
20 holding said disk in any position to which it may be turned substantially as set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

CHARLES H. REID.

Witnesses:

JENNIE P. BAILEY,
EVA LAURA NORMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."