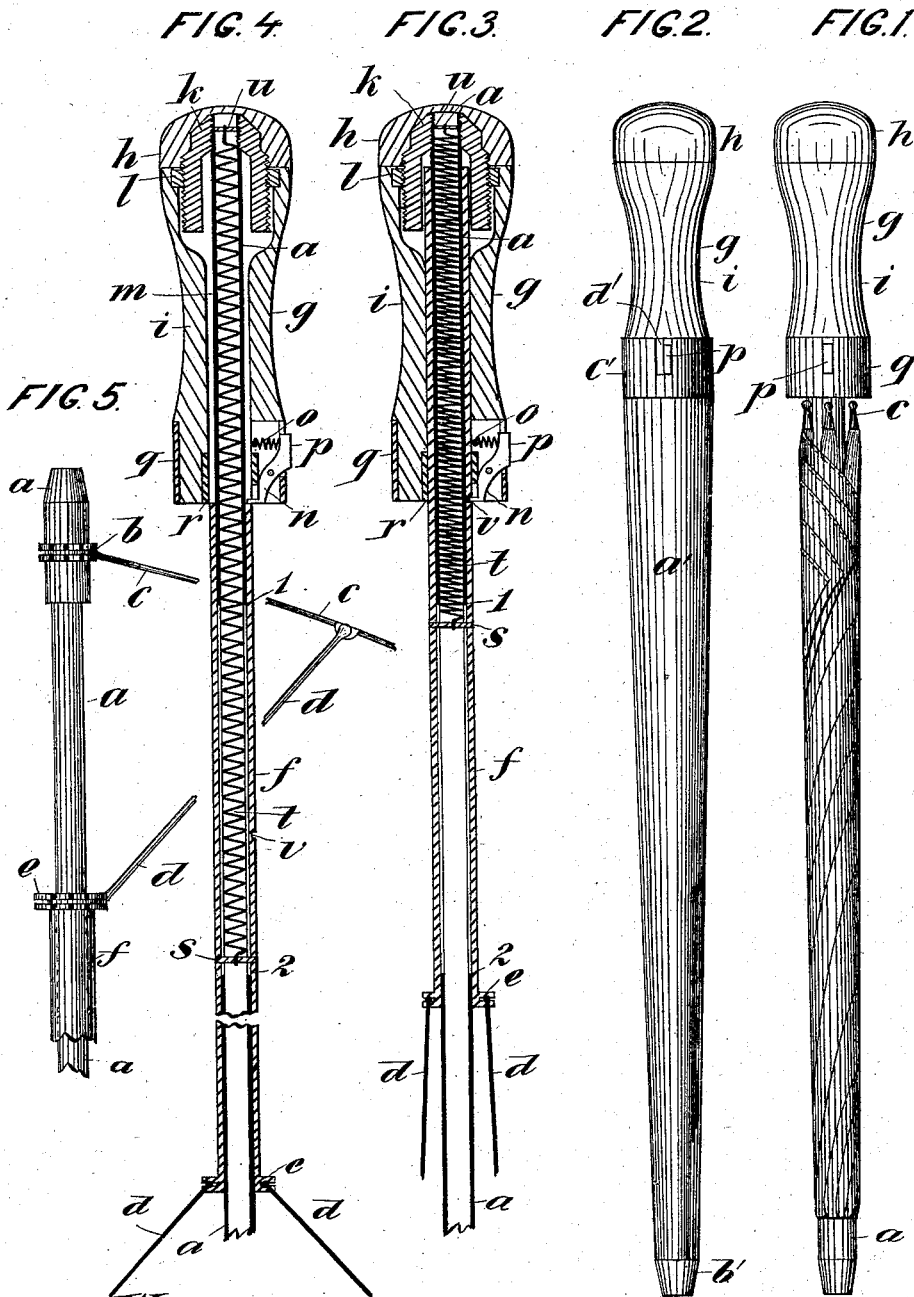


R. S. GALBRAITH

UMBRELLA.

No. 192,822.

Patented July 10, 1877.



Witnesses.
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UNITED STATES PATENT OFFICE

ROBERT S. GALBRAITH, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM SNOW, OF SAME PLACE.

IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. 192,822, dated July 10, 1877; application filed April 11, 1877.

To all whom it may concern:

Be it known that I, ROBERT STUART GALBRAITH, of the city and district of Montreal, Province of Quebec, Canada, gilder, have invented certain new and useful Improvements on Umbrellas, and cases for the same; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has reference to improvements in umbrellas, for more suitably arranging the parts or mechanism by which they are opened and shut. It also provides the umbrella in such form that it will wrap up so as to have only a small diameter, and by providing it with a suitable case it may serve and appear like a walking-cane when the case is on.

In the drawings hereunto annexed, similar letters of reference indicate like parts.

Figure 1 is an elevation showing my invention in a closed position, but with case removed. Fig. 2 is an elevation of my invention as shown in Fig. 1, but with case put on. Fig. 3 is a sectional detail of handle, rod, and mechanism connected therewith, showing the position the parts therein delineated will assume when the umbrella is in the position shown in Fig. 1. Fig. 4 is the reproduction of Fig. 3, showing the position the parts will assume when the invention is extended for use as an umbrella. Fig. 5 is a continuation at the bottom end of Fig. 4.

Letter *a* is a tube forming the main rod of the umbrella, having attached thereto the notched ring *b*, to secure the ends of the ribs *c* thereto in the ordinary way. *d* are the stretchers or struts for supporting the ribs *c* when they are extended in the position of an open umbrella. These are attached to the ribs *c* at one end, and to the notch-ring *e* at the other, in the same manner as at present in use. The notch-ring *e* is, however, attached to a long tube, *f*, hereinafter more particularly described.

The tube *a* having been cut to the required length, it is provided with a handle, *g*, attached to it in the following manner: The handle is divided into two parts, *h* and *i*. In the part *h* is screwed or otherwise secured a thimble, *k*, having an opening in its extremity, provided with a screwed thread to engage with

a corresponding screw-thread on the end of the rod *a*. Within the part of the handle *i* is set and secured a nut, *l*, provided with a thread corresponding with a screw-thread on the outer periphery of the thimble *k*, by which means the two parts *h* and *i* may be screwed together. Vertically through the body of *i* a hole, *m*, is bored, of sufficient size to allow the end of the tube *f* to pass up, as shown in Fig. 3, into the handle *i*, and the thimble *k* is also arranged for this purpose.

The tube *f* is of such size that when placed upon the tube *a* it will slide freely on it, and the bore of *m* is just sufficiently large to allow the tube *f* to slide freely into the handle. It is also of such length that when the umbrella is open, as in Fig. 4, the tube comes flush with the end of the handle *g*, where it is held by a catch, *n*, situated in a recess formed in the handle. This catch is of ordinary construction, and provided with a spring, *o*, to cause it to engage with the tube, unless pressure is brought to bear on its outer surface *p* to overcome the action of the spring *o* and disengage it.

q is an outer ferrule, to protect the handle from splitting, &c., and *r* is an inner ferrule, to protect the hole or passage *m* from wear. In this ferrule an opening is cut to allow the end of the catch *n* to pass through and act upon the tube *f*.

In the tube or rod *a* a slot is formed on each side, extending from point 1 to the point 2. (See Figs. 3 and 4.) This slot is slightly longer than the distance that the tube *f* has to slide upon the tube *a* to accomplish the opening and shutting of the umbrella. The length of the handle *g* is such that the length of the bore *m* will be sufficient to receive the end of the tube *f*, which passes up into it, as shown in Fig. 3.

In the tube *f* is inserted and riveted a pin, *s*, passing through the slotted openings in the tube *a*, and riveted in the tube *f*. When putting this pin in place, one end of a spiral spring, *t*, is caught and attached by it to the tube *f*, while the other end of the spiral spring is attached to the end of the tube *a* by a pin, *u*.

v is a notch cut in the tube *f*, so situated that when the umbrella is closed and the parts

assume the position shown in Fig. 3, the catch *n* will engage with the notch *v* and securely hold the parts in their position. When the parts are in the position last above mentioned the spring *t* will be so arranged in length as to still have enough tension to cause sufficient strain on the pin *s* to hold the parts in the position shown.

When it is desired to open the umbrella, I grasp the handle *g* with the fingers of one hand, and, by pressing with the thumb on *p*, I disengage the catch *n* from the notch *v*. I then take hold of the tube *f* with the other hand and force it to the position shown in Fig. 4, where the catch *n* then holds it.

To close the umbrella it is only necessary to press upon *p* and remove the end of the catch *n* from engagement with the end of the tube, and the spring *t* will at once close it, after which it can be folded.

When the umbrella is closed and folded, as shown in Fig. 1, and it is desired to use it as a walking-cane, I provide for it a case, *a'*, of any suitable material, but preferably of rubber. This case is provided at its bottom extremity with a metal thimble, *b'*, united to

the case *a'* in any ordinary manner. At the top of the case *a'*, I similarly attach to it a ferrule, *c'*, of suitable size to fit snugly on the ferrule *g*. In *c'*, I cut a notch, *d'*, after the fashion of the common notches cut in bayonets for attaching them to fire-arms, the projection *p* of the catch *n* serving to engage with the notch.

When it is desired to have the umbrella up, the case is removed and placed in the pocket or other receptacle of the user.

What I claim is as follows:

1. The tubes *a* and *f* and spring *t*, in combination with the handle *g*, having passages *m* and the catch *n*, substantially as and for the purpose set forth.

2. The combination of the handle *g*, having ferrule *g* and catch *n*, projecting as at *p*, with the case *a'*, having ferrule *c'*, provided with notch *d'*, substantially as and for the purposes set forth.

Montreal, 7th day of April, A. D. 1877.

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Witnesses:

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