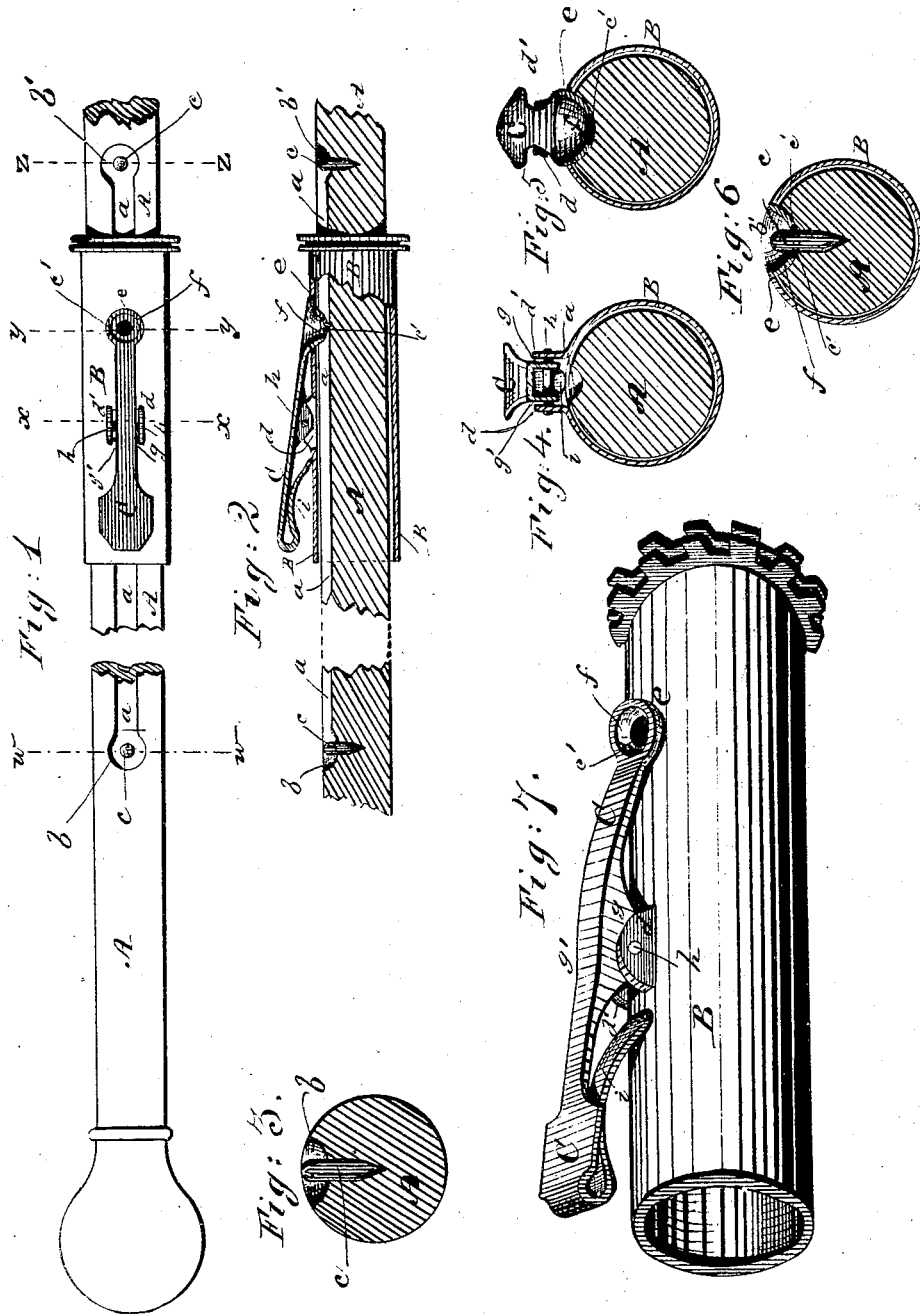


G. W. FRANCIS.  
Umbrellas.

No. 166,980.

Patented Aug. 24, 1875.



WITNESSES  
B. J. Mason  
Baltus de Long.

George W. Francis INVENTOR  
By his Attorney T. F. Young

# UNITED STATES PATENT OFFICE.

GEORGE W. FRANCIS, OF NEW YORK, N. Y.

## IMPROVEMENT IN UMBRELLAS.

Specification forming part of Letters Patent No. 166,980, dated August 24, 1875; application filed February 12, 1875.

*To all whom it may concern:*

Be it known that I, GEORGE W. FRANCIS, of New York city, in the county and State of New York, have invented certain new and useful Improvements in Umbrellas, Parasols, &c.; and I do hereby declare the following to be a clear and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is a plan view of my improved spring-catch runner for umbrellas, parasols, &c.; Fig. 2, a central longitudinal vertical section thereof; Fig. 3, an enlarged transverse vertical section in line *w w* of Fig. 1. Figs. 4 and 5 are similar vertical sections, taken, respectively, in the lines *x x* and *y y* of Fig. 1; Fig. 6, an enlarged transverse vertical section in line *z z*, Fig. 1, illustrating the punctured cup-shaped end of the spring-catch engaged with the countersunk pin on the handle; and Fig. 7 is an enlarged perspective view of the runner detached from the umbrella-handle.

The nature of my invention consists in providing the runner for umbrellas, parasols, &c., with a pivoted spring-catch formed of one piece of metal, the cup-shaped end of which is indented and furnished with an orifice, which, in traversing the longitudinal groove in the handle, engages the countersunk pins thereon, and thus retains the runner in a fixed position when the umbrella is either opened or closed; also, in having the other end of the catch bent over and turned under to form the spring for retaining and releasing its cup-shaped end; and, lastly, in having the two central sides of said spring-catch turned down to form bearings for the pivot-pin, all used in connection with countersunk pins. The handle A is provided with a longitudinal semi-circular groove, *a*, of the required length and depth, both the upper and lower end of which terminates in bowl or basin shaped cavities, *b b'*, each furnished with a central pin or projection, *c*, the rounded tops of which should not extend above their respective cavities, but about on a line with the top thereof. The runner B is furnished with pivot-bear-

ings *d d'*, which may be stamped up from its face, as shown, and also provided with a suitable aperture, *e*, to receive the cup-shaped end *f* of the pivoted spring-catch C, which is fashioned entirely of one piece of metal of the required shape to admit of one end, *f*, being punctured and stamped in a cup-shaped form, as shown, and its two sides *g g'*, at or near its center, turned down to form bearings for the pivot-pin *h*, and its other end turned over and under to form the spring *i*, for operating the catch, and releasing its hold on the countersunk pins *c*. The exterior of the cup-shaped end *f* of spring-catch C conforms exactly to the shape of the longitudinal groove *a*, both being of the best form to insure the least possible wear in the traverse of the runner up and down the handle, and also the most desirable shape for causing the aperture *e* in the base of end *f* to engage the countersunk pins C.

Having thus fully described my invention, I claim—

1. The runner B, provided with a pivoted spring-catch, C, made of one piece of metal, the cup-shaped end *f* of which is furnished with a central aperture, *e*, and its sides *g g'* turned down for pivot-bearings, and the other end turned over and under to form the spring *i*, substantially as described.

2. In combination with spring-catch C, the groove *a* in the stick, terminating at both ends in concave cavities *b b'*, having central projections *c*, for engaging with the aperture *e* of spring-catch, substantially as and for the purpose herein specified.

3. The combination of runner B with spring-catch C, groove *a*, concave cavities *b b'*, and pins *c*, when constructed and arranged substantially in the manner and for the purpose herein set forth.

In testimony whereof I have hereunto subscribed my name.

GEORGE W. FRANCIS.

Witnesses:

CHARLES E. MIX,  
WILLIAM G. BAILEY.