

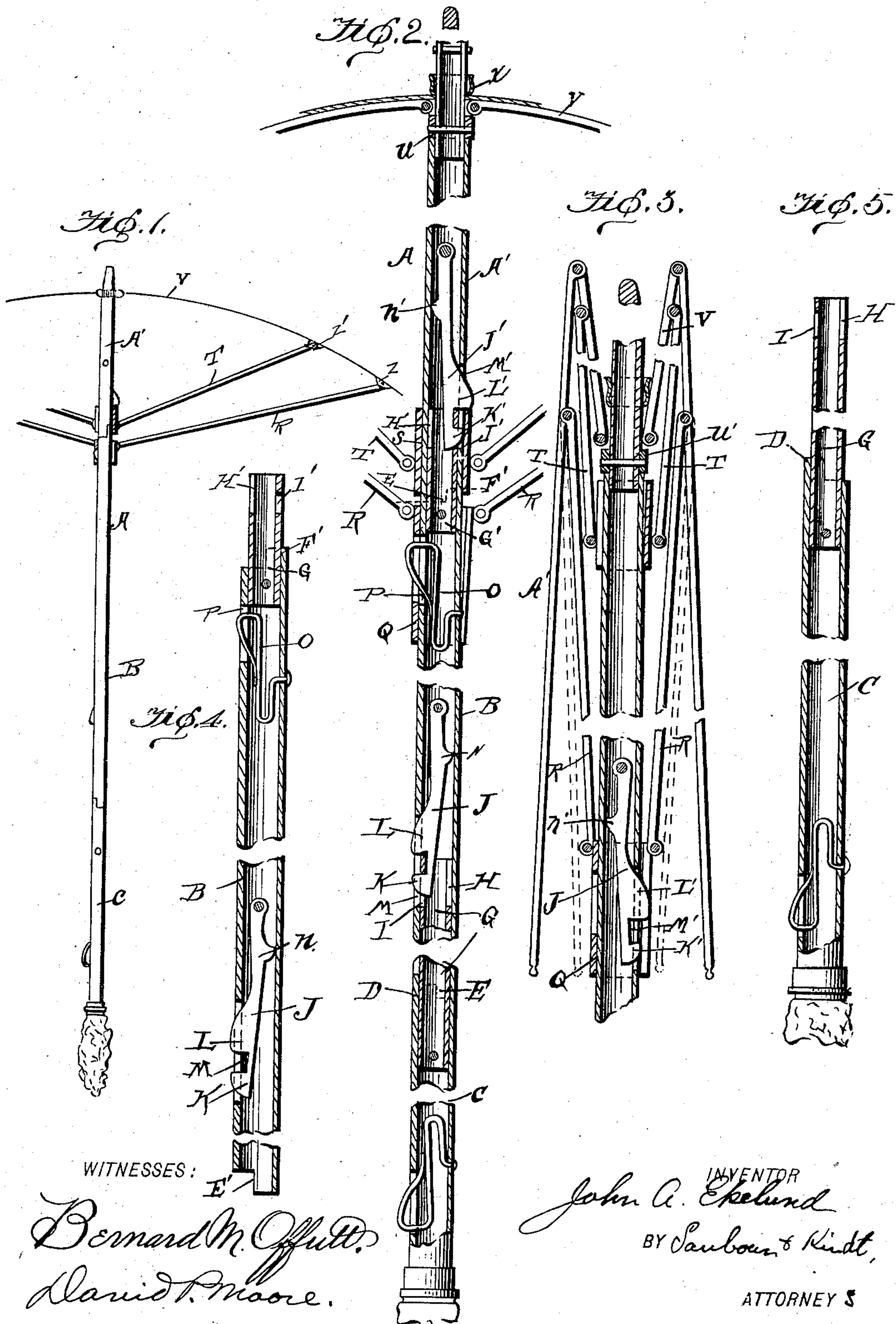
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Patented Apr. 22, 1902.

J. A. EKELOUND.
FOLDING UMBRELLA.

(Application filed Feb. 25, 1901.)

(No Model.)



WITNESSES:
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JOHN A. EKELUND, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-FOURTH TO NELS A. JOHNSON, OF MURDOCK, MINNESOTA.

FOLDING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 698,396, dated April 22, 1902.

Application filed February 25, 1901. Serial No. 48,737. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. EKELUND, a citizen of the United States, residing at No. 1846 Jackson street, in the city of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Folding Umbrellas, of which the following is a specification.

This invention relates to umbrellas, and has for its object to provide an umbrella which can be easily folded into compact form and which can also be folded as an ordinary umbrella when desired.

It has for its further object the construction of an umbrella-rod which is composed of sections which can be readily adjusted and easily taken apart, thus allowing the umbrella to be folded into compact form for carrying in a valise or package when not in use.

The invention further consists of the novel details of construction hereinafter fully described, and particularly pointed out in the claim.

Figure 1 represents a cross-sectional view of the umbrella, showing the rod in elevation. Fig. 2 represents a vertical section of the umbrella-rod with portions broken away. Fig. 3 represents a vertical section of the upper portion of the umbrella, showing it detached and folded. Fig. 4 represents a vertical section of the middle portion of the umbrella-rod detached. Fig. 5 represents a vertical section of the lower portion of the umbrella-rod detached.

Similar letters refer to similar parts throughout the several views.

A represents the rod of the umbrella, and consists of a hollow tube of suitable size, showing sections A', B, and C.

A' represents the upper section of the umbrella-rod, the lower end of which is provided with the slot E, which engages the lug or projection F' on the upper end of section B.

B represents the middle section of the umbrella-rod, the upper end of which is provided with the lug or projection F', and the lower end being provided with the slot E', which engages the lug or projection B on the upper end of section C.

C represents the lower section of the umbrella-rod, the upper end of which is provided

with the lug or projection D, which engages the slot E' in the lower end of section B. The lower end of section C is rigidly attached to any suitable handle. G represents a tube inserted into the upper end of section C and rigidly attached thereto. The tube G slips into the lower end of section B.

H represents a narrow slit in the upper end of tube G and is for the purpose of allowing the spring J to be pressed downward.

I represents a square hole in the end of tube G and is adapted to engage the lug or projection K on the lower end of the spring J and serves to hold the sections C and B together.

J represents a brass spring located on the inside of section B of the umbrella-rod, one end of which is pivotally attached thereto. The opposite end is provided with lugs or projections K and L.

K represents a lug or projection on the spring J and is adapted to engage the slot I in the tube G.

L represents a lug or projection on the end of spring J, which extends through a slit M in the umbrella-rod and serves as a means for pressing the spring J downward, thus disconnecting sections C and B.

N represents a lug on the spring J and serves to hold the lugs or projections L and K normally in the slit M.

O represents a wire spring located in the inside of section B of the umbrella-rod, one end of which is rigidly attached thereto, the opposite end being bent, forming a square surface which extends out of the slit P in the rod B in the usual manner.

G' represents a tube inserted into the upper end of section B and is rigidly attached thereto. The tube G' slips into the lower end of section A'.

H' represents a narrow slit in the end of tube G' and is for the purpose of allowing the spring J' to be pressed downward.

I' represents a square hole in the end of tube G' and is adapted to engage the lug or projection K' on the lower end of the spring J' and serves to hold the sections B and A' together.

J' represents a brass spring located in the inside of section A' of the umbrella-rod, one end of which being pivotally attached there-

to. The opposite end is provided with lugs or projections K' and L'.

K' represents a lug or projection on the spring J' and is adapted to engage the slot I' in the tube G'.

L' represents a lug or projection on the spring J', which extends through the slit M' in the rod A' and serves as a means for pressing the spring J' downward, thus disconnecting the sections A' and B, and also to hold the sleeve S in position.

N' represents a lug on the spring J' and serves to hold the lugs or projections L' normally in the slit M'.

Q represents a sleeve which is adapted to slip up and down on the rod A, to which is pivotally attached one end of the brace R. The other end of brace R is hingedly attached to the rib V at Z.

S represents a sleeve adapted to slide up and down on the rod A, to which is pivotally attached the brace T. The other end of brace T is hingedly attached to the rib V at Z'.

U represents a collar rigidly attached near the upper end of section A' of the umbrella-rod, to which is pivotally attached the rib V.

V represents a rib pivotally attached at one end to the collar U and which is midway of its length provided with a hinge-joint W, which allows the rib V to be folded or bent toward the rod A.

X represents a collar adapted to slide up and down on the upper end of section A' of the umbrella-rod, to which is attached one end of the cloth or covering of the umbrella.

In operation when it is desired to fold the umbrella the lower sliding sleeve is released from engagement with the spring-catch and is pulled downward. Then the upper sliding sleeve is released from engagement with the spring-catch and pushed upward until it

comes in contact with the collar which is rigidly attached to the upper end of the umbrella-rod. The ribs and braces are then folded or bent toward the rod, as shown in Fig. 3. The sections of the umbrella-rod are then disconnected, thus allowing the umbrella to be made into a compact form for carrying in valises, packages, &c.

It will be apparent that the umbrella can also be used and folded as an ordinary umbrella.

It is evident that slight changes may be made in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth; but,

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

In a folding umbrella, a rod composed of three jointed sections, each having an end reduced to slip in the end of the adjacent section, short coupling-sections interior of the other sections opposite the joints, a pair of sleeves slidably mounted upon the sections one above the other, the upper one when it is raised being adjacent the joint of the upper and central sections, a wire spring-catch located in the lower section to engage the lower sleeve to hold the same down when the umbrella is closed, another wire spring-catch in the central section to hold the sleeve up when the umbrella is raised, a notched spring provided with a lug mounted in the middle section to hold one of the couplings in place, and another similar spring mounted in the upper section to hold the upper sleeve in place.

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Witnesses:

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