(No Model.) 2 Sheets—Sheet 1.

A. BEAUCHAMP.

FOLDING UMBRELLA.

No. 485,905. Patented Nov. 8, 1892.

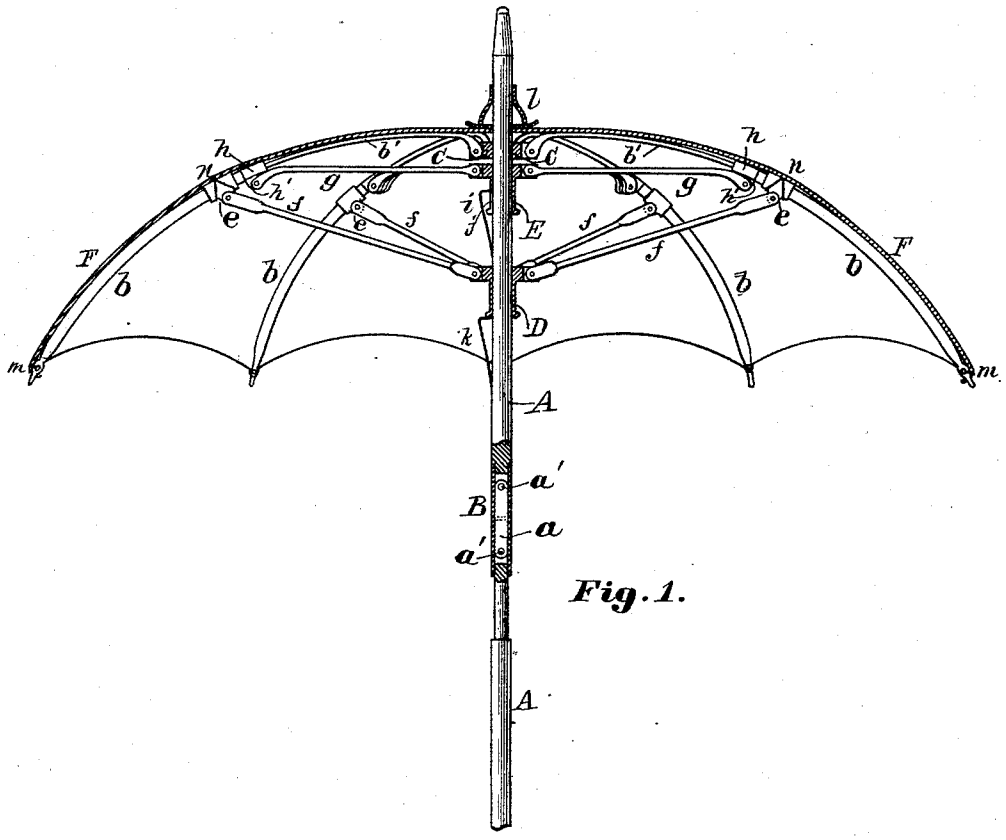

Fig. 1.

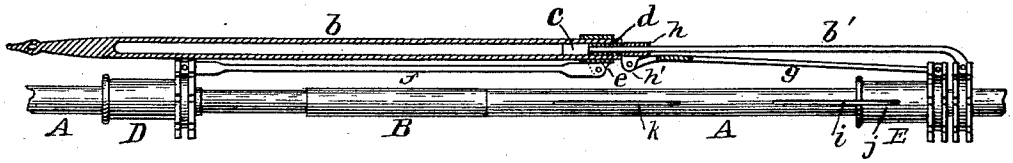

Fig. 2.

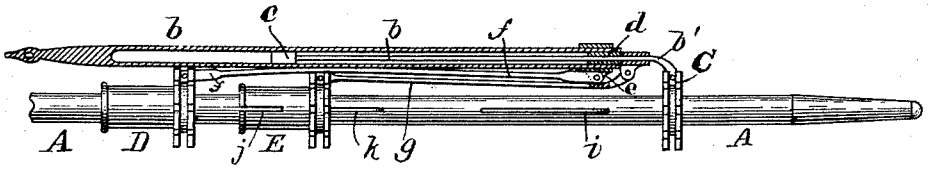

Fig. 3.

Witnesses
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Inventor
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Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

A. BEAUCHAMP.

FOLDING UMBRELLA.

No. 485,905. Patented Nov. 8, 1892.

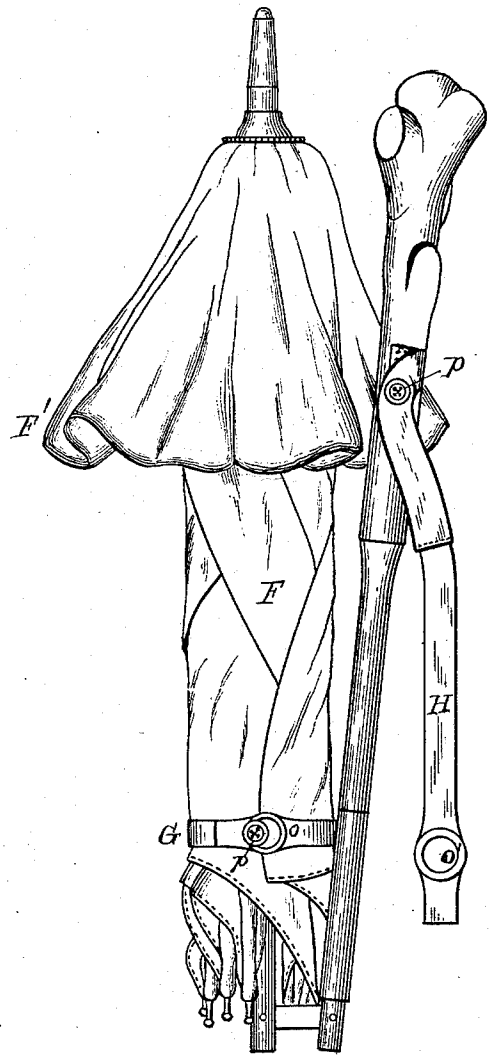

Fig. 4.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AIMÉ BEAUCHAMP, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JULES J. GIRARD, OF SAME PLACE.

FOLDING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 485,905, dated November 8, 1892.

Application filed July 19, 1892. Serial No. 440,460. (No model.)

To all whom it may concern:

Be it known that I, AIMÉ BEAUCHAMP, of Fitchburg, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Folding Umbrellas, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the construction of umbrellas that when not in use may be reduced to about one-half their normal lengths; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings and to the claims hereinafter contained, and in which my invention is clearly pointed out.

Figure 1 of the drawings is a sectional elevation of an umbrella embodying my invention. Fig. 2 is a partial sectional elevation of the stick, the runners, one of the telescopic ribs, and one brace in each of the two sets in the positions which they assume when the umbrella is expanded to its greatest length and is closed. Fig. 3 is a similar view with the parts in the positions they assume when the umbrella is folded or contracted to its minimum length, and Fig. 4 is an elevation of the umbrella as it appears when shortened by sliding the solid sections of the ribs into the tubular sections and folding the stick.

In the accompanying drawings, A is the stick or handle, made in two parts connected together by the link *a* and the pivot-pins *a'* *a'* and held in extended position by the sleeve B, all in a well-known manner.

C is the notched flange, made fast in a fixed position on the upper section of the stick A and to which the ribs are pivoted in a well-known manner. Each rib is made in two parts *b* and *b'*, the former being tubular and the latter being a solid steel rod fitted to and movable endwise into said tube *b*. To prevent separation of said rod and tube, the end of the rod *b'* which enters the tube *b* is enlarged to form a head *c*, and the end of the tube which surrounds the rod *b'* is contracted by the insertion of a thimble *d* to form a shoulder, against which said head *c* abuts when said rib is extended to its greatest length, as shown in Fig 2. The upper or inner end of each of the tubular sections *b* of the ribs is provided with ears *e*, to which is pivoted one end of a brace or stretcher *f*, the opposite end of which is pivoted in a well-known manner to the runner D.

The stick A has mounted thereon above the runner D a second runner E, to which are pivoted a series of braces or stretchers *g*, the opposite ends of which are pivoted to ears *h'*, formed on sleeves *h*, fitted loosely upon the sections *b'* of the ribs, so that said rib-sections *b'* may be freely moved endwise through said sleeves when it is desired to contract the length of the umbrella, as shown in Figs. 3 and 4.

The runner E is held in the position shown in Fig. 1 by the supporting spring-catch *i*, which engages with the slot *j* cut in the hub of said runner, so as to serve the double purpose of holding said runner in its elevated position and preventing said runner from being moved about the stick A when the umbrella is extended ready for use.

The runner D is held in its elevated position when the umbrella is spread by the spring-catch *k* in a well-known manner.

F is the covering, secured at the center to the stick A by the thimble *l* in any well-known manner and to the tubular sections *b* of the ribs at *m* and *n*, but having no connection to the rib-sections *b'*.

By the use of the two runners D and E and the two sets of stretchers *f* and *g*, arranged to act, respectively, upon the rib-sections *b* and *b'*, the telescopic ribs are rendered very stiff and reliable when the umbrella is spread for use, and at the same time said ribs may be readily and easily shortened to nearly one-half their original or expanded length by sliding the sections *b'* within the sections *b*, as shown in Fig. 3.

G is a strap provided with a ring *o* and button *p* for the purpose of securing the ends of the rib-sections *b* and the covering to the stick when the umbrella is closed, but expanded to its greatest length, in a well-known manner, or to do the same thing when the umbrella is folded, as shown in Fig. 4, and H is a similar strap, also provided with a ring *o'* and a button *p'*, said strap being made fast at one end

to the handle end of the stick, as shown in Fig. 4, and is used to secure said handle in position by passing said strap around the pendent folded portion F′ of the covering F.

The operation of my invention is as follows: The umbrella being spread, with the several parts in the positions shown in Fig. 1, if it is desired to fold or contract the same to its smallest compass the party using it first releases the runner E and moves it down the stick A into contact with the runner D, which is then released and moved downward on the stick A to close the umbrella, the runner E following the runner D without aid from the operator. The operator then places the tip end of the stick against some solid object and with one hand grasped about the middle of the umbrella with just sufficient force to prevent the ribs bending outward and crippling and with the other hand grasping the ends of the tubular sections of the ribs he forces them endwise toward the tip of the stick as far as they can be moved, when the upper or central portion of the covering will be folded upon itself somewhat in the form of a cape, as shown at F′ in Fig. 4. The lower portion of the covering is then properly wrapped around the ribs and stick and secured in position by the strap G, the sleeve B is slipped below the joint in the stick A, and the lower or handle end of said stick is turned upward alongside the folded covering, as shown in Fig. 4, and the strap H wrapped around the folded cape-like upper portion of the cover, and the ring *o′* is secured to the button *p′*. If now it is desired to put the umbrella in condition for immediate use, the strap H is unfastened, the handle portion of the stick is brought into line with the other portion, and the sleeve B is slipped over the joint in said stick, the strap G is unfastened, the end of the handle is placed upon some solid object and with the hand grasping the lower ends of the rib-sections *b* and the covering. Said rib-sections *b* are drawn toward the handle end of the stick till the ribs are fully expanded.

The operator spreads the umbrella by moving the runner D upward until it passes above the spring-catch *k*, the runner E moving upward with the runner D. The runner E is then moved upward still farther until the spring-catch *i* engages with the upper end of the slot *j*, as shown in Figs. 1 and 2. The umbrella is now in condition for use and may be closed and opened precisely like an ordinary umbrella by simply moving the runner D along the stick A in the proper direction, the runner E remaining in the position shown in Fig. 1 until it is desired to fold or contract the umbrella for packing it away in a valise.

It should be understood that the proportions of the several parts are somewhat distorted in the drawings, because of the difficulty of drawing them in their true relative proportions at the small scale that it is necessary to use and have the drawings photolithograph well.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an umbrella, a series of ribs made in two parts and fitted to be telescopically movable endwise one within the other, in combination with two runners and two sets of stretchers, one set connecting one of the runners to the tubular sections of said ribs and the other set connecting the other runner by independent movable attachments to the other rib-sections.

2. In an umbrella, the combination of a series of ribs made in two parts telescopically connected and movable one upon or within the other, two independent runners, a series of stretchers connecting one of said runners to fixed ears on the tubular rib-sections, a series of sleeves fitted loosely to and movable endwise on the other rib-sections above and entirely disconnected from the tubular rib-sections, and a second series of stretchers connecting the other of said runners to ears on said sleeves.

3. In an umbrella, the combination of the stick A, the runners D and E, the latter provided with the slot *j*, the spring-catches *i* and *k*, a series of ribs made in two sections telescopically connected and movable one upon or within the other, a series of stretchers connecting the runner D to fixed ears on one series of the rib-sections, a series of movable sleeves mounted one on each of the other rib-sections, and a second series of stretchers connecting the runner E to said sleeves.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 18th day of July, A. D. 1892.

AIMÉ BEAUCHAMP.

Witnesses:
N. C. LOMBARD,
ROBERT BALL EDES.