(No Model.)

J. D. NESBITT.

UMBRELLA.

No. 324,581. Patented Aug. 18, 1885.

Fig. 2.

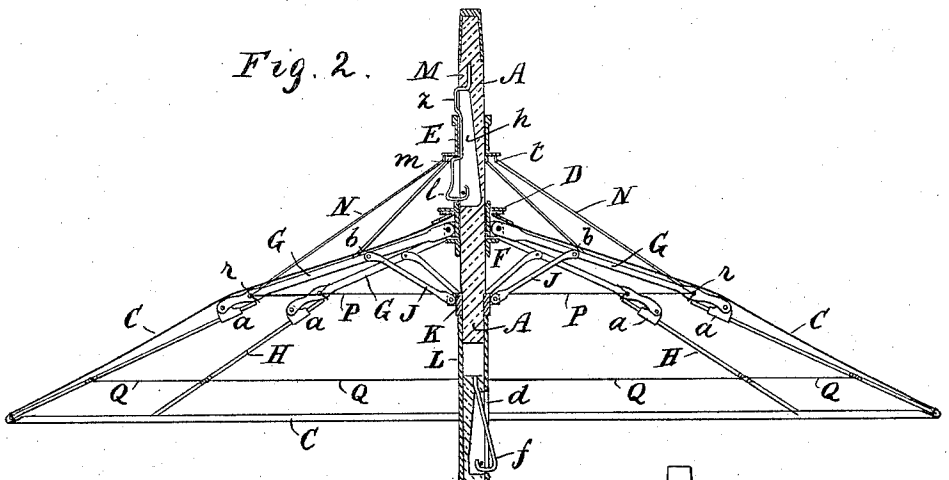


Fig. 1.

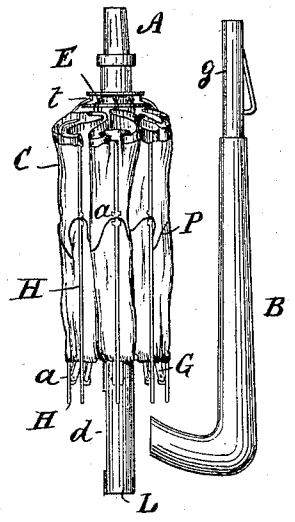


Fig. 3.

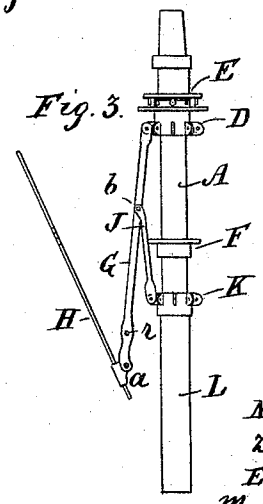
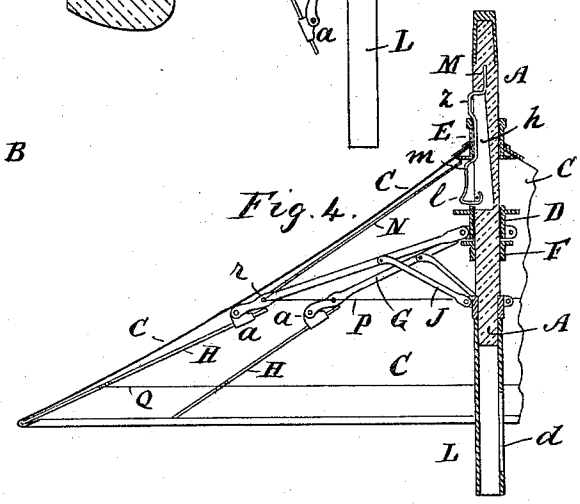


Fig. 4.



Witnesses.

E. Blanta.

L. J. White.

Inventor.

John D. Nesbitt,

Per C. C. Shaw

Attorney.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JOHN D. NESBITT, OF EVERETT, MASSACHUSETTS.

UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 324,581, dated August 18, 1885.

Application filed December 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. NESBITT, of Everett, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Umbrellas, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved umbrella, with the handle represented as detached; Fig. 2, a vertical longitudinal section of the same, showing the handle in position for use and the top expanded or open; Fig. 3, a sectional view showing one of the ribs partially folded, and Fig. 4 a vertical longitudinal section showing a modification in the construction.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of umbrellas which are adapted to be folded for packing or transportation; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective article of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the staff, B the handle, and C the body or covering.

Fitted to slide on the staff A there are two sleeves, D E, and permanently attached thereto below the sleeve D there is an annular flange-stop, F.

A series of radially-arranged downwardly-inclined ribs, G, are jointed at their upper ends to the sleeve D, each of said ribs being provided at its outer end with an extension or auxiliary rib, H, which is connected thereto by a rule-joint, *a*, thereby adapting it to be folded upwardly, as shown in Figs. 1 and 3, but not permitting it to fall unduly below the line of the main rib G, to which it is attached.

Each of the ribs G is provided with a brace, J, the lower ends of said braces being jointed to a flanged sleeve, K, permanently attached to the body A, and the upper ends, respectively, jointed at *b* to the ribs G.

Permanently attached to the lower end of the staff A, and forming a part thereof, there is a tube, L, provided with an elongated slot, *d*.

The handle B is reduced in size at its upper end, as seen at *g*, and provided with an ordinary spring-catch, *f*, for attaching it to the staff A, the reduced portion being inserted in the lower end of the tube L, and the spring *f* protruding through the slot *d* when the handle is in position for use, as shown in Fig. 1.

The upper portion of the staff A, near its tip, is provided with an elongated laterally-opening slot, *h*, and fitted to work in this slot there is a spring-catch, M, having the shoulders *m'*.

A series of cords or braces, N, have their lower ends attached at *r* to the ribs G, and their upper ends at *t* to the sleeve E, the object of said cords being to assist the braces J in keeping the ribs G in proper position. There are also a series of cords, P, connecting the main ribs G, and a corresponding series, Q, connecting the auxiliary ribs H, the object of the cords P Q being to keep the ribs in proper position and strengthen the umbrella.

The body or covering C is attached to the ribs G H and sleeve D in any suitable manner, the braces N being preferably disposed above the covering, as shown in Fig. 2. The braces N may, however, be arranged beneath the covering C, if desired, by attaching the upper portion of the covering to the sleeve E above said braces, instead of to the sleeve D, as shown in Fig. 4.

From the foregoing it will be obvious that my improved umbrella opens from the top instead of from the bottom after the manner of ordinary umbrellas, and that it may be readily and compactly folded for storage or transportation.

In the use of my improvement, the body being folded, as shown in Fig. 1, the handle B is inserted in the tube L and secured by the spring *f*, as shown in Fig. 2, after which the auxiliary ribs H and lower portion of the body

are turned down or outwardly, and the top of the umbrella expanded or opened by forcing the sleeves D E down over the spring M until the sleeve D engages the shoulder or catch *l*, after which the sleeve E is moved upwardly toward the tip of the staff A, to put a strain on the braces N until it engages the shoulder *m*, by which it will be held in position and said braces kept distended, in a manner which will be readily obvious without a more explicit description.

The spring M projects outwardly, as shown at *z*, above the sleeve E, and in closing the umbrella this projection is pressed inwardly to disengage the shoulder *m* from the sleeve E, after which said sleeve is forced down over the lower portion of said spring to disengage the shoulder *l* from the sleeve D, and both sleeves then moved upwardly over the spring.

Each of the ribs H may be provided with one or more auxiliary ribs jointed to its outer end, if desired, in substantially the same manner that the ribs H are jointed to the ribs G at *a*, or in any other suitable manner.

The stop F acts to prevent the sleeve D from being pushed downwardly too far on the staff A, and also to keep the ribs G slightly expanded when the umbrella is closed, so that in opening it they will not be "stopped on a dead-center," but always move outwardly.

Having thus explained my invention, what I claim is—

1. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, and braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, substantially as described.

2. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, and cords connecting said main ribs at points outside their joints with said braces, substantially as described.

3. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, and cords connecting said main ribs at points outside their joints with said first-mentioned braces, substantially as described.

4. The combination of an umbrella-staff, a sliding sleeve thereon, studs for limiting the movement of said sliding sleeve in one direction, a catch for limiting its movement in the other direction, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, and upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, substantially as described.

5. The combination of an umbrella-staff, a sliding sleeve thereon, studs for limiting the movement of said sliding sleeve in one direction, a catch for limiting its movement in the other direction, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, and cords connecting said main ribs at points remote from their inner ends, substantially as described.

6. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, auxiliary ribs pivoted to the outer ends of said main ribs, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, and upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, substantially as described.

7. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, cords connecting said main ribs at points outside their joints with said braces, and auxiliary ribs pivoted to the outer ends of said main ribs, substantially as described.

8. The combination of an umbrella staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, auxiliary ribs pivoted to the outer ends of said main ribs, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, and cords connecting said main ribs at points outside their joints with said main braces, substantially as described.

9. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends

to the main ribs, and auxiliary ribs pivoted to the outer ends of said main ribs, substantially as described.

10. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, cords connecting said main ribs at points remote from their inner ends, and auxiliary ribs pivoted to the outer ends of said main ribs, substantially as described.

11. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points remote from their inner ends, substantially as described.

12. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points outside their joints with the main ribs, substantially as described.

13. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, cords connecting said main ribs at points outside their joints with said main braces, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points outside their joints with the main ribs, substantially as described.

14. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, a stationary sleeve on said staff, main braces pivoted at one end to said main ribs and at the other end to said fixed sleeve, cords connecting said main ribs at points outside their joints with said braces, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points outside their joints with the main ribs, substantially as described.

15. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points outside their joints with the main ribs, substantially as described.

16. The combination of an umbrella-staff, a sliding sleeve thereon, a catch for fastening said sleeve, main ribs pivoted to said sleeve, an auxiliary sliding sleeve above the sliding sleeve aforesaid, a catch for locking said sleeve, upper braces connected at their upper ends to said auxiliary sleeve and at their lower ends to the main ribs, cords connecting said main ribs at points remote from their inner ends, auxiliary ribs pivoted to the outer ends of said main ribs, and cords connecting said auxiliary ribs at points outside their joints with the main ribs, substantially as described.

17. In an umbrella, the spring-catch M, provided with the shoulders *l m*, whereby it is adapted to fasten or lock the sleeve D in position when fully depressed, and the sleeve E when fully elevated, substantially as shown and described.

18. In an umbrella, the spring-catch M, provided with the shoulders *l m* and projection *z*, in combination with the sleeves E D, substantially as set forth.

19. The improved folding umbrella herein described, the same consisting of the staff A, provided with the spring-catch M and stop F, the handle B, provided with the spring-catch *f*, the ribs G, provided with the braces J P N, the ribs H, provided with the braces Q, and the sleeves D E and body or covering C, constructed, combined, and arranged to operate substantially as described.

JOHN D. NESBITT.

Witnesses:
C. A. SHAW,
L. J. WHITE.