(No Model.)

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UMBRELLA OR PARASOL.

No. 456,405. Patented July 21, 1891.

Fig. 1.

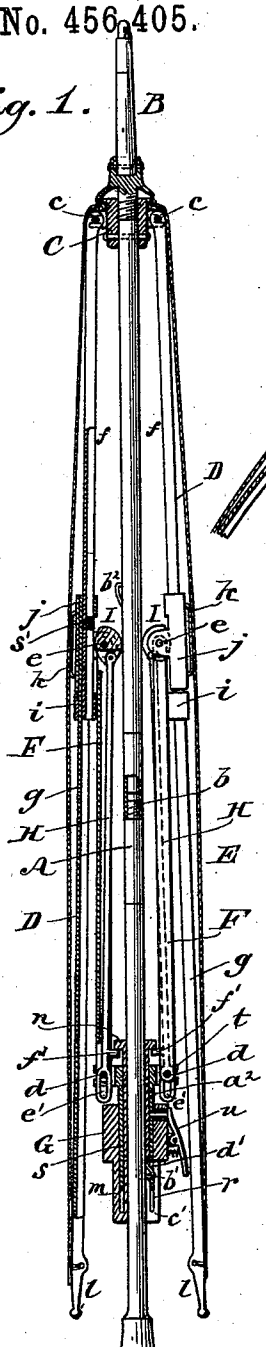


Fig. 2

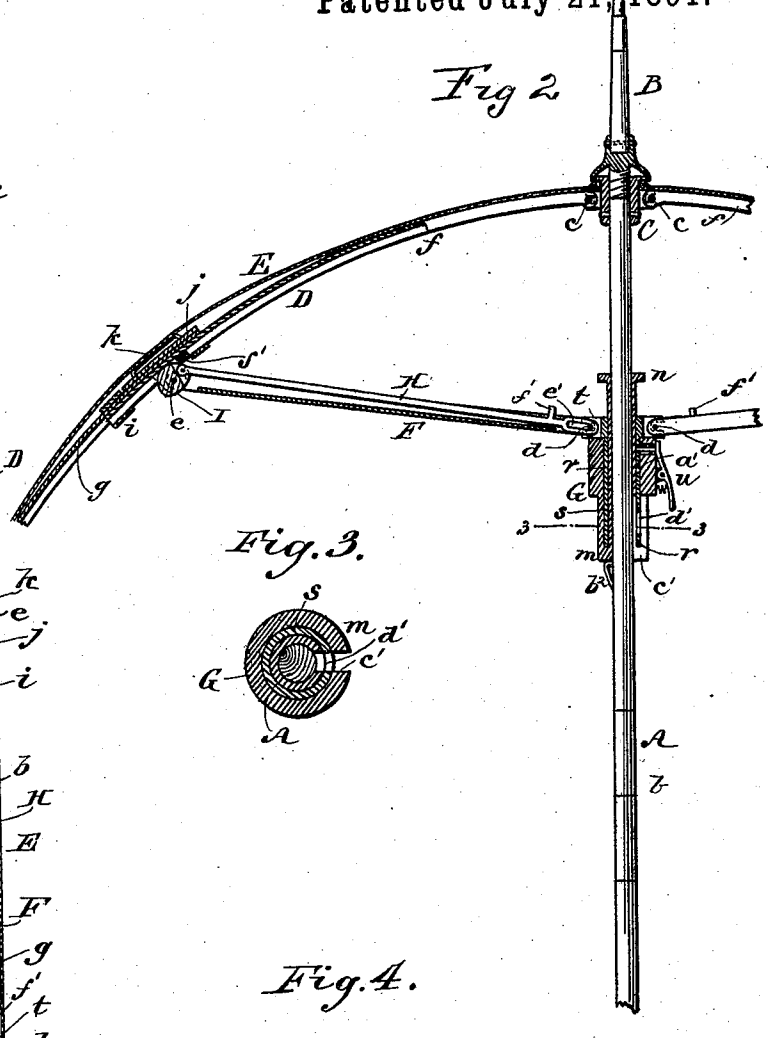
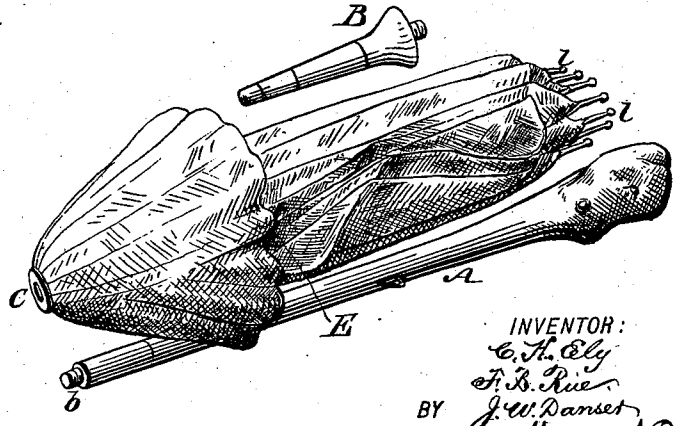


Fig. 3.

Fig. 4.



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UMBRELLA OR PARASOL.

SPECIFICATION forming part of Letters Patent No. 456,405, dated July 21, 1891.

Application filed May 13, 1890. Serial No. 351,686. (No model.)

To all whom it may concern:

Be it known that we, CHARLES H. ELY, of Atlantic Highlands, in the county of Monmouth and State of New Jersey, JAMES WESLEY DANSER, of Freehold, in the county of Monmouth and State of New Jersey, and FRANK B. RUE, of Atlantic Highlands, in the county of Monmouth and State of New Jersey, have invented a new and useful Improvement in Umbrellas, Parasols, and the Like, of which the following is a full, clear, and exact description.

This invention, while applicable to parasols and other like shade structures designed to be carried by the hand, is more especially intended to be applied to umbrellas which afford protection both against sun and weather, and it will here be described accordingly.

It relates to that descriptson of umbrellas and the like which not only have their staff portions capable of being dismembered or lengthened or shortened, but also have their ribs of telescopic construction to provide for their being contracted when not in use into a smaller space; and the invention consists in a novel construction of parts which, while applicable to ordinary umbrellas or umbrellas using a "paragon" frame, provides in a very simple and practicable manner for packing the whole article when not in use into a small space or compass without removing its cloth or covering, so that it may very conveniently be carried in a valise or satchel and as readily be put into condition for use when required, the whole constituting a knockdown umbrella of novel character, substantially as hereinafter described, and more particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a longitudinal mainly sectional view of an umbrella in its whole condition with our invention applied and as closed, but with the handle shown only in part. Fig. 2 is a further longitudinal mainly sectional view of the same, showing the umbrella in its open condition. Fig. 3 is a transverse sectional view in part and upon a larger scale on the line 3 3 in Fig. 2; and Fig. 4 is a view in perspective of the umbrella in its closed condition and with certain parts adjusted and dismembered to provide for packing the whole away in a grip-sack or satchel.

A is the stick or staff of the umbrella, made separable intermediately of its length, as at *b*, by screw-threaded tenon and socket. The tip B of the staff also is or may be similarly made separable. These two constructions, which are not claimed as new in themselves, make the only actual dismemberments when providing for packing away the umbrella in a satchel or other contracted space. C is the top notch, to which the ribs D are pivoted, as at *c*. E is the cloth or cover of the umbrella. F F indicate the braces or stretchers pivoted, as at *d*, to the runner G and indirectly, as at *e*, to the ribs. This is a general description only of these parts; but in order to carry out our invention said parts or certain of them have special constructions, which we will now proceed to describe.

Both the ribs and braces are of paragon construction—that is, are of U shape in their transverse section. Each rib D is made up of an inner section *f*, which is pivoted to the top notch C and an outer section *g*. These sections are fitted to slide one along or over the other, and are connected and provided for this purpose, the inner one with a terminal fast sleeve *i* and the outer one with a corresponding terminal fast sleeve *j*, on the latter of which is a projection *k*, to which the cover E is attached, as well as at the top notch and at the outer tips *l* of the ribs. The inner section *f* forms the stationary portion of each rib and the outer section *g* the sliding section thereof.

The runner G is made up of an outer sleeve *m*, having its sliding bearing on the stick A and provided with a collar *n* on its top. This sleeve has a recess *r* within it, down within which fits an independent sleeve *s*, that carries at its top the lower notch *t*, to which the braces F are pivoted, as at *d*. A spring-catch *u* or other fastening is provided on the exterior of the outer sleeve *m*, which fastening is adapted to engage with either one or other of two apertures a' a^2, arranged one above the other in the inner sleeve *s* to lock the one sleeve with the other.

The stick A is provided with the usual springs b' b^2 for engagement with the runner G, that is slotted on its side, as at c', to hold the umbrella either closed or open, the inner sleeve s having an aperture d' in it, through which the lower spring b' is free to project.

Each brace F is fitted with a longitudinal sliding rod H, having a longitudinal slot e' at its inner end, which embraces the pivot-ring d, that attaches the braces to the runner. Each of said rods H also has a projection f', that comes under the collar n of the runner when the umbrella is closed, and said rods are further supported and eccentrically connected at their outer ends with cams I, pivoted, as at e, to the sleeves j of the outer sliding sections g of the ribs, to which the outer ends of the ribs are also pivoted.

As the parts are represented in Fig. 1, which shows the umbrella closed, the fastening u is engaged with the lower aperture a' in the inner sleeve s of the runner G, the outer sleeve m of the runner then being in its lowermost position relatively to the inner sleeve; also, the slotted portions e' of the rods H being extended below the pivot-ring a and kept there by the action of the collar n on the projections f' of said rods. This adjustment of the rods H throws the pivoted cams I free from bite or hold on the ribs D. To extend the umbrella, the fastening u is disengaged from the lower aperture a' in the inner sleeve s and the outer sleeve portion m of the runner shoved up and the fastening u made to engage with the upper aperture a^2 of the inner sleeve s. This sliding up or out of the outer sleeve m causes said sleeve to bear on the slotted ends e' of the rods H and slide or force outward said rods, and in so doing the cams I are turned to make them lock the inner and outer rib-sections together by each cam coming under or against a stop s' in the inner section f of either rib. This holds the sliding section g of either rib extended, after which the whole runner G is slid up or along the stick to spread out the umbrella in the ordinary way, as shown in Fig. 2.

When it is required to dismember the umbrella and to contract its parts so that the whole shall be reduced to a small space or compass suitable for packing into a valise, as shown in Fig. 4, the umbrella is first closed, after which the fastening u is released and the runner pulled down until the spring fastening or catch u falls into the second aperture a', as shown in Fig. 1. The spring b' in the stick is then tripped, and the runner G, with its accompanying braces F and rods H, and lower rib-sections g, with which said braces and rods are connected, are pushed upward to their top position in the umbrella. This having been done, the separable parts of the staff or stick are then disconnected, and the umbrella is in a condition, as shown in Fig. 4, to be carried in a small hand-bag or valise.

When it is required to put the umbrella into condition for use, the dismembered parts of the staff or stick are connected and the runner G pulled down until it catches in the spring b'. Then the spring-catch u is released from the lower aperture a' in the runner and the outer sleeve m slid up until the fastening u engages with the upper aperture a^2 in the runner. The umbrella may then be spread open readily for use like any ordinary umbrella.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a knockdown umbrella or parasol, the combination, with the sectionally-constructed ribs, the outer sections of which are fitted to slide on or along the inner sections, the top notch to which said ribs are pivoted at their inner ends, the runner carrying the braces pivoted at their inner and outer ends, respectively, to the runner and to the sliding sections of the ribs, of longitudinally-adjustable rods applied to said braces, and cams controlled by said rods adapted to lock or release the sliding sections of the ribs relatively to the stationary or inner sections thereof, substantially as specified.

2. In a knockdown umbrella or parasol, the combination, with a runner, a rib having a sliding section, and a brace pivoted to the rib and runner, of a cam for locking the sliding section of the rib in position, and a rod having its outer end connected to the cam and its inner end loosely pivoted to the runner, substantially as described.

3. In a knockdown umbrella or parasol, the combination, with a runner having a collar at its upper end, a rib having a sliding section, and a brace pivoted to the runner and rib, of a cam on the sliding rib-section, and a rod having its outer end connected to the cam and its inner end loosely pivoted to the runner and provided at said inner end with a projection adapted to come under the collar of the runner when the umbrella is closed, substantially as herein shown and described.

4. In a knockdown umbrella or parasol, the combination, with a rib having a sliding section and a cam carried by the said rib, of a runner composed of an inner and outer sleeve and provided with means for locking the sleeves together, a brace pivoted to the inner sleeve of the runner and to the rib, and a connection between the cam and the inner sleeve of the runner, substantially as described.

5. In a knockdown umbrella, the combination, with the separable stick or staff and the runner G, composed of a longitudinally-adjustable outer sleeve m, inner sleeve s, and a fastening adapted to lock the outer sleeve with the inner one at different points in the length of the latter, of the braces F, pivoted to the inner sleeve, the longitudinally-adjustable rods H, applied to said braces and controlled by the inner and outer sleeves of

the runner, the sectionally-constructed ribs D, composed of an outer section fitted to slide on or along the inner section thereof and having the outer ends of the braces in pivoted connection with said sliding sections, and the locking and releasing cams I, controlled by the rods H, essentially as specified.

6. A knockdown umbrella having outer sliding rib-sections, a cover united with the latter, a separable staff, an adjustable runner, braces uniting the runner with the sliding rib-sections and locking and releasing devices applied to said rib-sections, and rods applied to the braces controlling the same subject to the adjustment of the runner, substantially as herein set forth.

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