No. 620,504. Patented Feb. 28, 1899.

C. A. ROSENHOLZ & J. H. LAMPE.

FOLDING UMBRELLA.

(Model.) (Application filed May 12, 1898.)

Fig. 1.

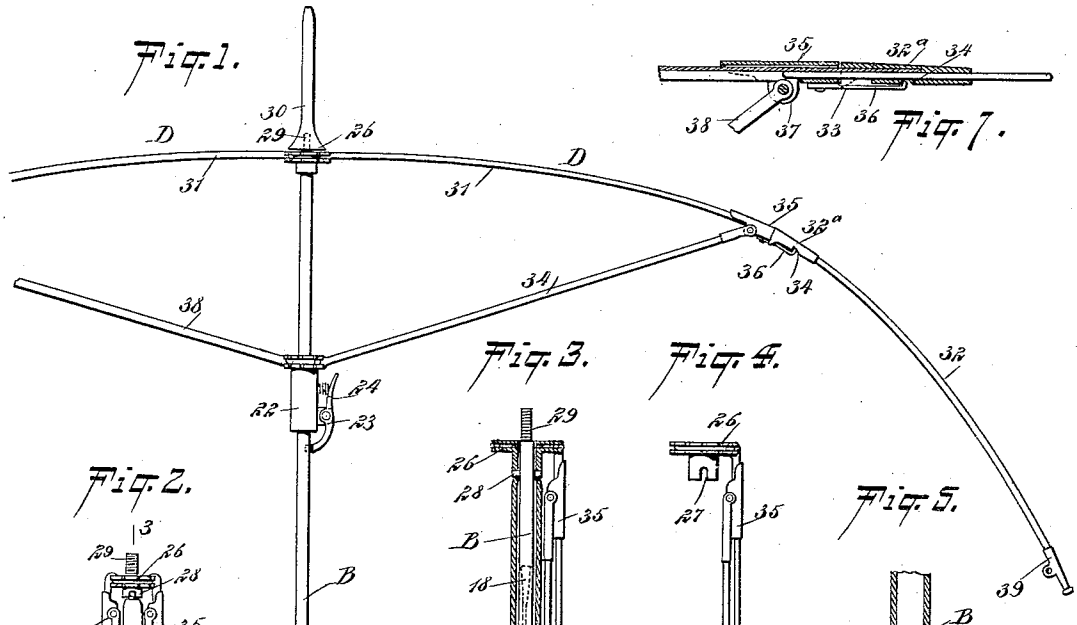

Fig. 7.

Fig. 2.

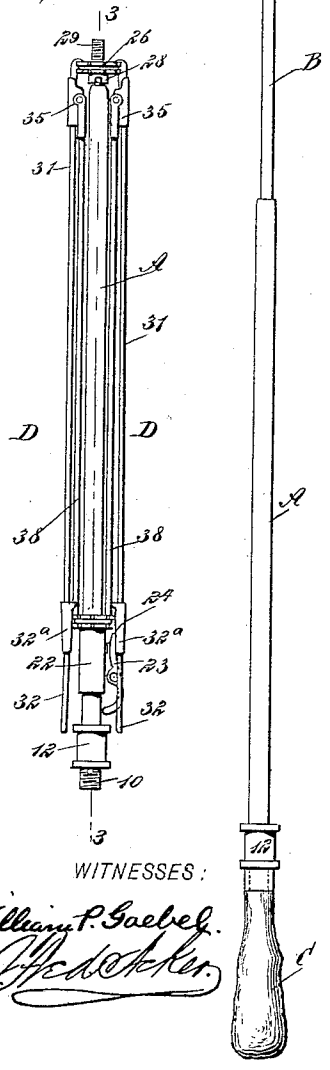

Fig. 3.

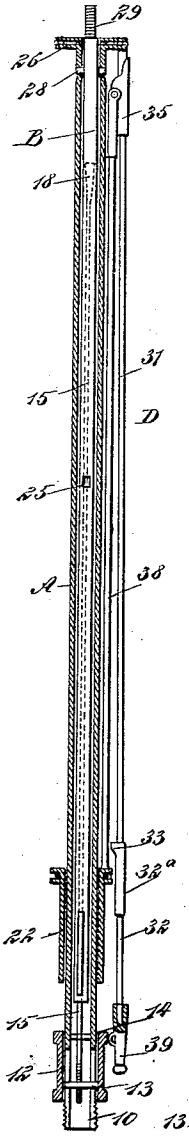

Fig. 4.

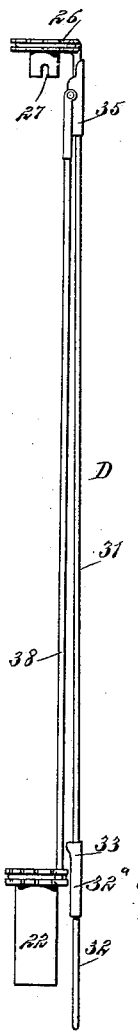

Fig. 5.

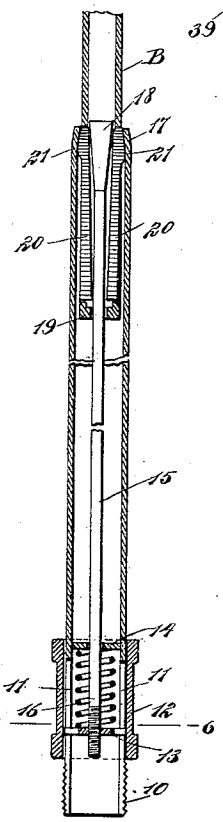

Fig. 6.

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CARL A. ROSENHOLZ AND JOHN H. LAMPE, OF WARDNER, IDAHO.

FOLDING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 620,504, dated February 28, 1899.

Application filed May 12, 1898. Serial No. 680,486. (Model.)

To all whom it may concern:

Be it known that we, CARL ANDREW ROSENHOLZ and JOHN HENRICK LAMPE, of Wardner, in the county of Shoshone and State of Idaho, have invented a new and useful Improvement in Folding Umbrellas, of which the following is a full, clear, and exact description.

One object of our invention is to provide an umbrella the stick and ribs whereof are telescopic and so constructed that the umbrella may be expeditiously and conveniently reduced to less than half the length of the ordinary umbrella and to such length that the folded article may be readily carried in an ordinary valise.

Another object of the invention is to provide a means whereby the runner, ribs, and stretchers may be quickly removed from the stick and replaced by corresponding parts of less dimensions, enabling the umbrella-stick to be quickly utilized as a stick for a parasol cover and frame.

A further object of the invention is to provide a means whereby both the handle and ferrule may be quickly disengaged from the stick, so as to lessen the length thereof when the parts are slid one within the other.

Another object of the invention is to so construct an umbrella that the cover may be readily removed and replaced, enabling a number of covers of different colors to be used in connection with a single frame, the means provided for the removal of the covers from the frame and the attachment of the covers to the frame being such that the covers will not be lacerated or injured by their removal or replacement.

Another object of the invention is to accomplish the results above set forth by a construction of folding umbrella which will be simple, durable, economic, and light.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a side elevation of the umbrella frame and stick in position for use, the frame being opened. Fig. 2 is a side elevation of an umbrella stick and frame in its closed position. Fig. 3 is a longitudinal section taken practically on the line 3 3 of Fig. 2, the parts being drawn on a larger scale than in Fig. 2. Fig. 4 is a side elevation of a portion of the frame of the umbrella or parasol disengaged from the stick. Fig. 5 is a longitudinal vertical section through a portion of the stick, the parts being drawn on an enlarged scale. Fig. 6 is a horizontal section on the line 6 6 of Fig. 5, and Fig. 7 is a longitudinal section through the members of a rib and the connecting devices for the rib members.

The stick is made in two sections, a handle-section A and an upper section B, the two sections being preferably tubular, and the upper section is so constructed as to slide within the handle-section A. The lower end of the handle-section is adapted for detachable connection with a handle C, the said lower portion of the handle-section of the stick being provided, for example, with an exterior thread 10, enabling the handle to be screwed thereon. Above the lower end of the handle-section of the stick opposing longitudinal slots 11 are made, and around the slotted portion of the handle-section of the stick a sleeve 12 is mounted to slide, the said sleeve having attached thereto near its lower end a spider 13, (shown in Figs. 5 and 6,) the arms of the spider being mounted to slide in the aforesaid slots 11.

Above the spider 13 an apertured partition 14 is horizontally secured within the handle-section A of the stick, and a rod 15 is passed through a suitable opening in the partition 14 and at its lower end is screwed or otherwise secured in the spider 13, a spring 16 being coiled around the rod 15, bearing upon the spider and against the partition 14. The upper end 17 of the handle-section of the stick is preferably given a slight inward curve, as shown particularly in Fig. 5, and the upper end of the rod 15 is provided with a wedge-shaped head 18, which normally stands at the upper end of the aforesaid handle-section.

The lower end of the upper section B of the stick is closed with the exception of an aperture through which the rod 15 loosely passes. This rod is virtually a latch-rod and is adapted to hold the upper section, when carried out to its fullest extent from the handle-section

of the stick, in a fixed position. This is accomplished by providing slots in opposite sides of the inner or lower end of the upper section of the stick and loosely placing or pivoting friction-latches 20 in the said slots, each of the said friction-latches being provided with a head 21 at its upper end adapted to be forced out in frictional engagement with the upper portion of the handle-section of the stick when the upper portion of the stick is drawn out to its fullest extent by reason of the wedge 18 of the latch-rod 15 entering the space between the two latch-heads 21, as shown particularly in Fig. 5.

An ordinary runner 22 is provided, and the said runner is usually fitted with a lock-lever 23, held normally in locking position by a spring 24, located at the handle end of the said lever, and the head of the lever 23 is adapted to enter an opening 25 in the upper section of the stick, as shown in Fig. 1, the said opening being also shown in Fig. 3. The collar of the crown 26 is provided, preferably, with a slot 27 in its lower edge at opposite sides, and these slots are adapted to receive projections 28 from the upper portion of the upper section of the stick, as shown in Figs. 2 and 3. The upper end 29 of the upper portion of the stick, or that part which extends above the crown, is preferably solid, reduced in diameter, and exteriorly threaded in order that the ferrule 30 may be screwed thereon to bind the cover of the umbrella between its lower end and the crown.

The ribs D are made in two telescopic sections 31 and 32. The sections 31, which are the inner sections of the ribs, are secured to the crown in any suitable or approved manner and are "paragon," while the other sections 32 of the ribs are circular in cross-section and are adapted to slide in the paragon sections. A sleeve 32^a is secured upon the outer extremity of each paragon section 31 of a rib, and each sleeve 32^a is preferably provided with guide-lugs 33, extending downward from their upper ends, and each sleeve 32^a is further provided with a notch or recess 34 in its under surface, as shown best in Figs. 1 and 7. The sleeves 32^a may be denominated "locking-sleeves."

A guide-sleeve 35 is mounted to slide upon each paragon or inner section of a rib, and these sleeves are secured in any suitable or approved manner to the upper ends of the outer or round sections 32 of the ribs. Each guide-sleeve is provided with a spring-tongue 36, which is in the nature of a latch and has its free end upturned to enter the recess 34 in the locking-sleeve of the outer member or section 32 of the rib, as shown in Figs. 1 and 7, when the sections of a rib are extended as far as possible, at which time the two sleeves 32^a and 35 will be brought together. Each guide-sleeve 35 is provided with ears 37, extending downward therefrom in such manner as not to interfere with the movement of the guide-sleeves on the paragon sections of the ribs, and the outer ends of the stretchers 38 are pivoted between the ears 37 of the guide-sleeves, the inner ends of the stretchers being pivotally attached in the ordinary way to the runners 22.

As has been heretofore stated, the runner for the frame is removable, and the attachment of the cover to the ribs is effected through the medium of tubular tips 39, sewed or otherwise secured to the cover, the tips being of such shape as to neatly fit over the lower ends of the outer sections 32 of the ribs, as shown in Figs. 1 and 3. When the ribs are extended to their full length and the stick of the umbrella likewise, the frame of the umbrella is operated upon the stick in the usual manner. When it is desired to fold the umbrella, the runner is permitted to drop, the latches 36 are disconnected from the locking-sleeves 32^a, and the outer sections of the ribs are made to telescope in the inner or paragon sections, as shown Figs. 2, 3, and 4. The handle-sleeve 12 is then carried upward or outward, compressing the spring 16 and taking the wedge-head of the latch-bar 15 from between the heads 21 of the latches 20, whereupon the latches 20 will be free to move inward sufficiently to disconnect themselves from the handle-section of the stick, and the upper section of the stick may then be made to telescope into the handle-section A until the upper end of the handle-section shall strike the lower end of the crown 26, as shown in Fig. 3. By removing the ferrule 30 and the handle C the frame of the umbrella will be reduced to less than one-half the length of an ordinary umbrella. The cover during the folding operation is preferably disengaged from the ribs.

If it be desired to substitute a parasol-frame for the umbrella-frame on the stick, the ferrule 30 is removed, and the crown, ribs, and runner are slipped from the stick and replaced by corresponding shorter parts.

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

1. In a folding umbrella, a stick constructed in telescopic sections, the inner section at its inner end being provided with latches having means for engagement with the outer section, and a spring-controlled latch-rod having a head adapted to enter between the latches of the inner section and force said latches outwardly, for the purpose specified.

2. In a folding umbrella, the combination, with a stick comprising a handle-section and an upper section held to slide within the handle-section, of a sleeve held to slide upon the handle-section, a latch-rod carried by said sleeve, provided with an expanding head, and latches carried by the inner end of the upper or inner section of the stick, the latches being at opposite sides of the said latch-rod and provided with means for engagement with the outer section, for the purpose set forth.

3. In a folding umbrella, the combination,

with a stick consisting of a handle-section and an upper section held to slide in the handle-section, a sleeve mounted to slide upon the handle-section, a spring-controlled latch-rod carried by the said sleeve and located partially within the handle-section and partially within the upper section, the upper end of the latch-rod being provided with an expanding head, of latches capable of movement to and from each other and located at the inner end of the upper portion of the stick one at each side of the latch-rod, the said latches being provided with heads adapted to engage with the inner wall of the handle-section of the stick, for the purpose specified.

4. In a folding umbrella, a rib consisting of an inner and an outer section, a locking-sleeve secured to the extremity of the inner section, the said sleeve being provided with a notch in its under face, the outer section of the rib being adapted to slide through the said sleeve and within the inner section, and a guide-sleeve attached to the inner end of the outer section, the guide-sleeve being mounted to slide on the inner section, and provided also with means for attachment to a stretcher, and a spring-latch carried by the guide-sleeve and adapted to enter the notch in the said locking-sleeve, for the purpose specified.

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