

C. F. MILLER.
FOLDING UMBRELLA.
APPLICATION FILED JULY 16, 1909.

956,716.

Patented May 3, 1910.

Fig. 1.

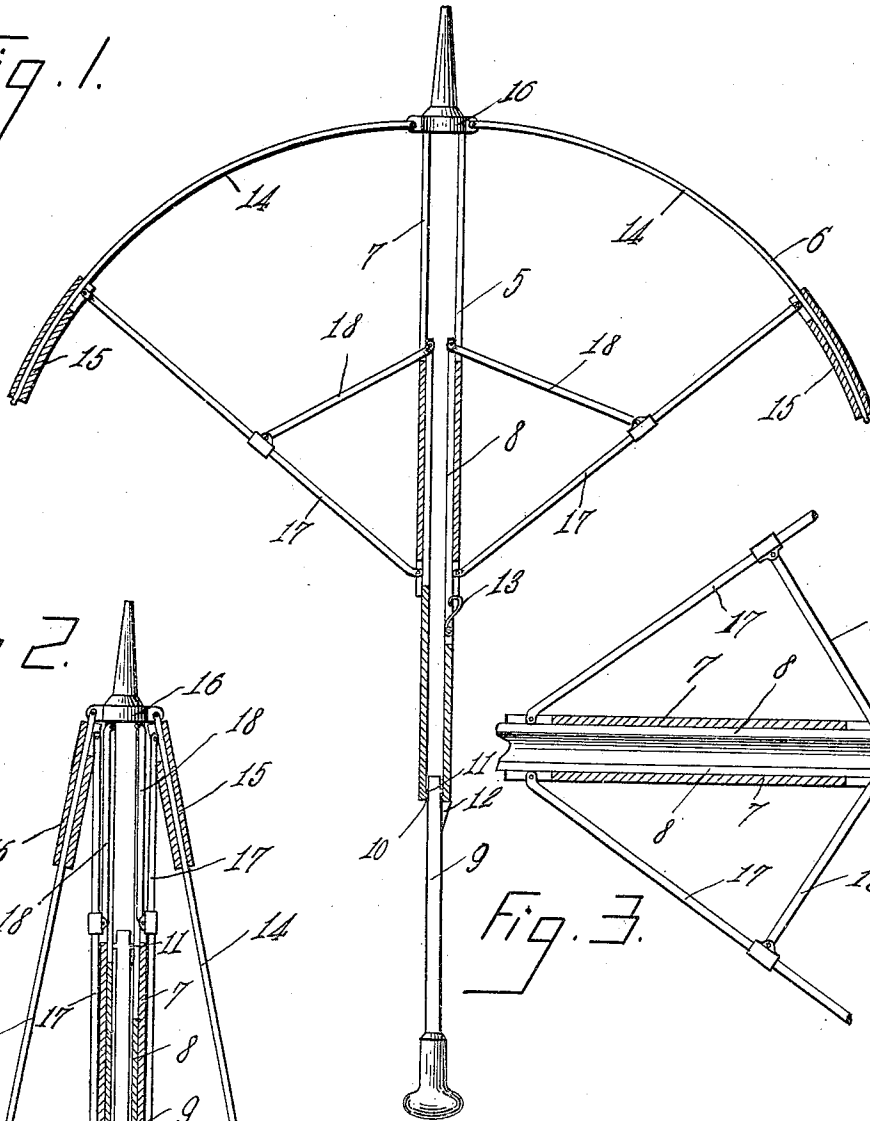


Fig. 2.

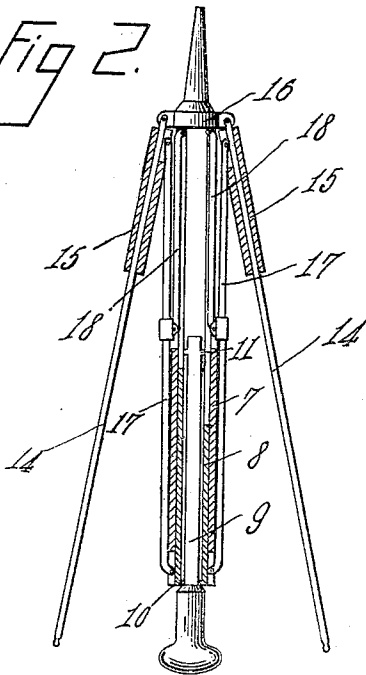
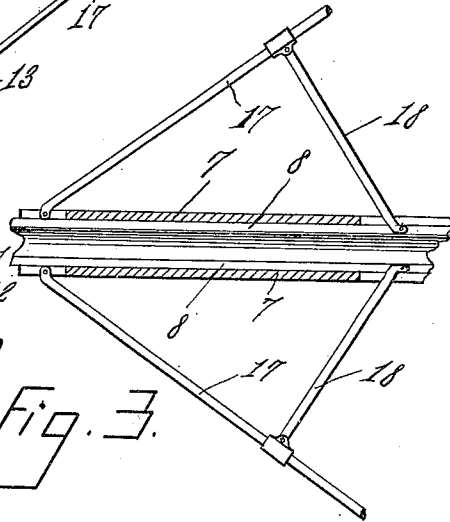


Fig. 3.



Witnesses

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CLARENCE F. MILLER, OF MARLETTE, MICHIGAN.

FOLDING UMBRELLA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLARENCE F. MILLER, a citizen of the United States, residing at Marlette, in the county of Sanilac, State of Michigan, have invented certain new and useful Improvements in Folding Umbrellas; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in umbrellas and more particularly to the folding type.

It has for its object the provision of a device of that kind wherein the staff and frame may be folded into a comparatively small compass when not in use.

Another object is the provision of a construction wherein the cover will be raised when unfolding or extending the staff.

With these and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is a longitudinal sectional view of the device showing the parts in unfolded position. Fig. 2 is a similar view showing the parts in folded position. Fig. 3 is a fragmentary longitudinal section of the intermediate staff.

Similar numerals of reference are employed to designate corresponding parts throughout.

The staff is designated in general by the numeral 5 and the frame by the numeral 6. In the present instance the staff is shown to consist of three telescoping sections, one of which is designated by the numeral 7 and will subsequently be termed the ferrule section, another by the numeral 8 which will subsequently be termed the intermediate section and a third by the numeral 9 which will subsequently be termed the handle section. The ferrule section is hollow and of a length and diameter to receive the intermediate section, and the latter is also hollow

and of a length and diameter to receive the handle section. When the sections are extended their combined lengths will correspond to the length of the ordinary umbrella staff and when telescoped will correspond to about one-third the length of the ordinary umbrella staff. The outer end portion of the intermediate section 8 is interiorly provided with an annular flange 10 and the inner end of the handle section 9 which telescopes into the intermediate section is provided with a similar flange 11, which bears on the inner face of the flange 10 and limits the outward movement of the handle section. The latter is exteriorly provided with a spring catch 12 of the ordinary type which is adapted to bear on the outer end of the intermediate section, after the handle section has been extended to its full extent and serves to prevent inward movement of the handle section. The intermediate portion of the intermediate section 8 is provided with a spring catch 13, which is adapted to bear on the inner end of the ferrule section 7, when the said intermediate section has been opened to its full extent, and prevent inward movement of the intermediate section.

The rib sections are designated in general by the numerals 14 and 15. The inner ends of the inner of these sections are pivoted to a channeled collar 16 fixedly secured to the outer end portion of the ferrule section 7. The outer sections 15 of the ribs are tubular and receive the inner sections 14. Connection between the inner ends of the outer sections 15 and ferrule section 7 is established by means of the brace rods 17, the opposite ends of which are pivoted to the inner ends of the outer sections 15 and inner end of the ferrule section 7.

The ferrule section is provided with a plurality of longitudinal slots, extending from points adjacent its lower end to points adjacent the channeled collar 16 and connection between the intermediate section 8 and brace rods 17 is established by means of connecting rods 18, the outer ends of which are pivoted to the intermediate portions of the brace rods 17 and the inner ends of which extend through the longitudinal slots of the ferrule section and are pivoted to the inner end of the intermediate section 8, it being understood that the latter is provided with recesses at its inner end for the reception of the inner ends of the connecting rods. Thus it will be seen when the parts are in position

as shown in Fig. 1 and it is desired to fold the umbrella the intermediate section 8 is released by moving its spring catch 13 inwardly and out of engagement with the inner end of the ferrule section 7; this done, the intermediate section is shoved inwardly carrying with it the connecting rods 18. The latter are changed from their position at substantially right-angles to the staff to a position parallel with the latter, and this movement of the connecting rods brings the brace rods 17 to a position parallel with the staff, or substantially so. The inward movement of the brace rods force the outer sections 15 of the ribs over the inner sections 14 until the inner ends of the outer sections 15 arrive at points adjacent the channeled collar 16, whereby said ribs will, owing to their pivotal connection with the ferrule section, fall to a position substantially parallel with the latter. The handle section 9 may then be telescoped into the intermediate section 8 by releasing the spring catch 12 from engagement with the outer end of the intermediate section. Thus it will be seen that the device is folded into a comparatively small compass in a comparatively simple manner. It will be observed that the employment of the usual runner used with most devices of this kind is eliminated, the section 8 being the equivalent of the runner in bringing the parts to folded position. When it is necessary to unfold the device the same can be done, by extending the handle section 12 and thence the intermediate section 8.

The outward movement of the intermediate section forces the brace rods 17 outwardly and the outward movement of the latter extends the rib sections 14 and 15. Thus it will be seen that the movement of extending the staff sections will raise the cover.

From the foregoing it can be seen that I have provided a device which is comparatively simple in structure and inexpensive to manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

What is claimed as new, is:—

A folded umbrella comprising a ferrule section provided with oppositely arranged longitudinal slots, a second section telescoping into the first section and a handle section telescoping into the said second section, telescoping ribs having their inner ends pivoted to the ferrule section, brace rods having their outer ends pivoted to the outer sections of the ribs and their inner ends pivoted to the inner end of the ferrule section and connecting rods having their outer ends pivoted to the brace rods and their inner ends extending through the slots of the ferrule section and pivoted to the inner end of the second-named section.

In testimony whereof, I affix my signature, in presence of two witnesses.

CLARENCE F. MILLER.

Witnesses:

CHAS. J. BUFFEY,
LEVI JOHNS.