

(No Model.)

G. W. DILL.
UMBRELLA.

No. 435,735.

Patented Sept. 2, 1890.

Fig. 1.

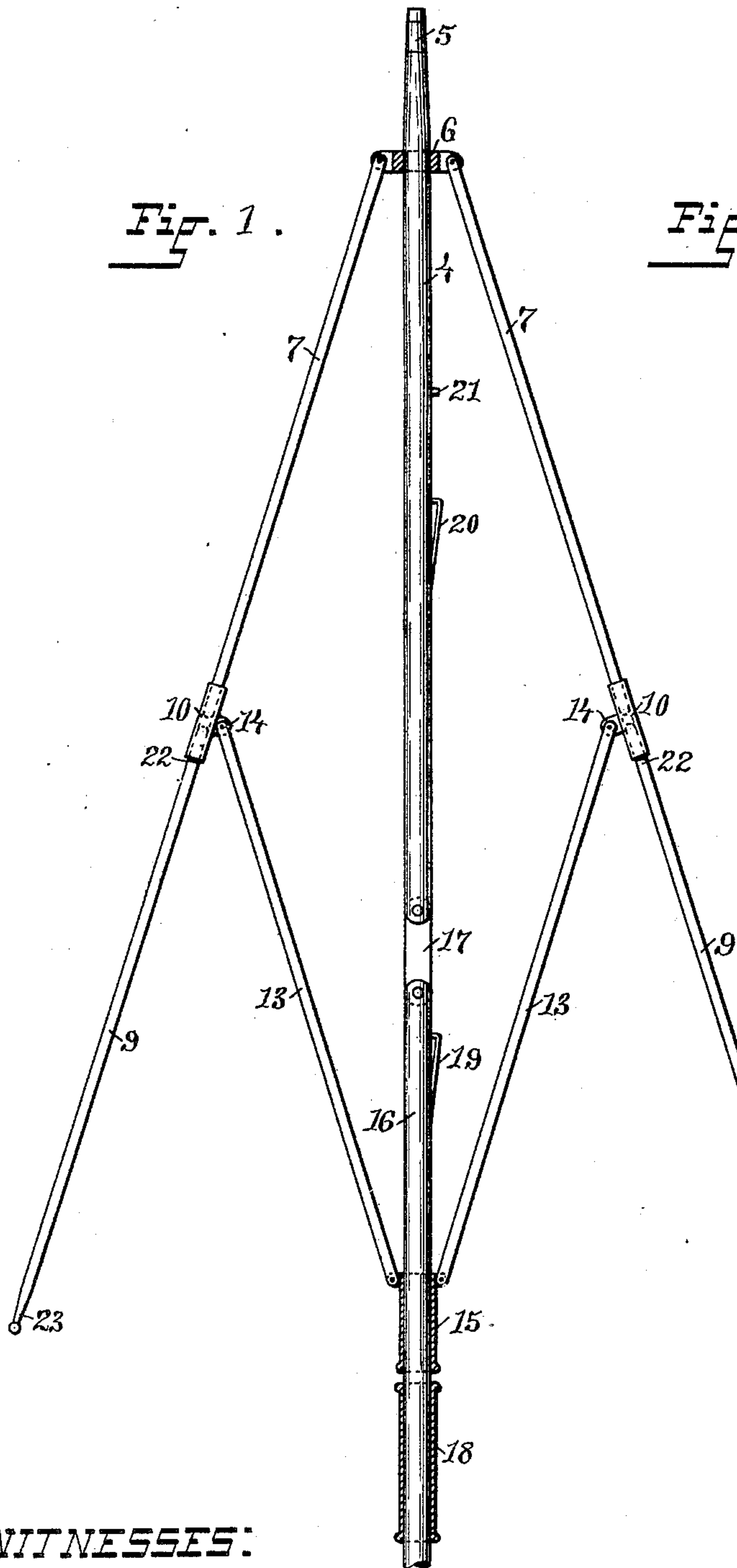


Fig. 2.

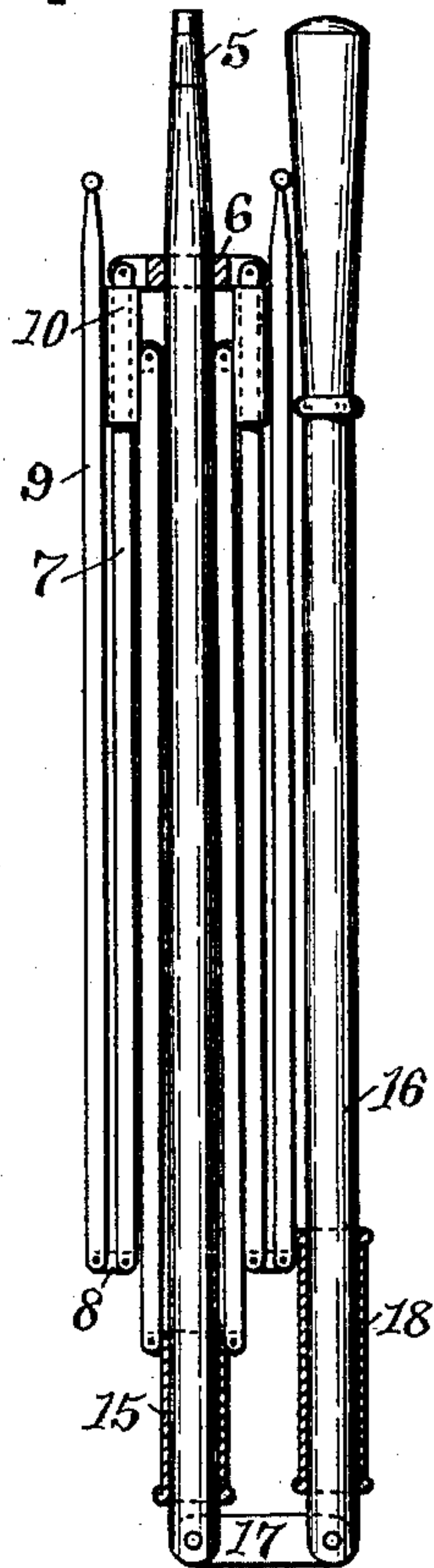
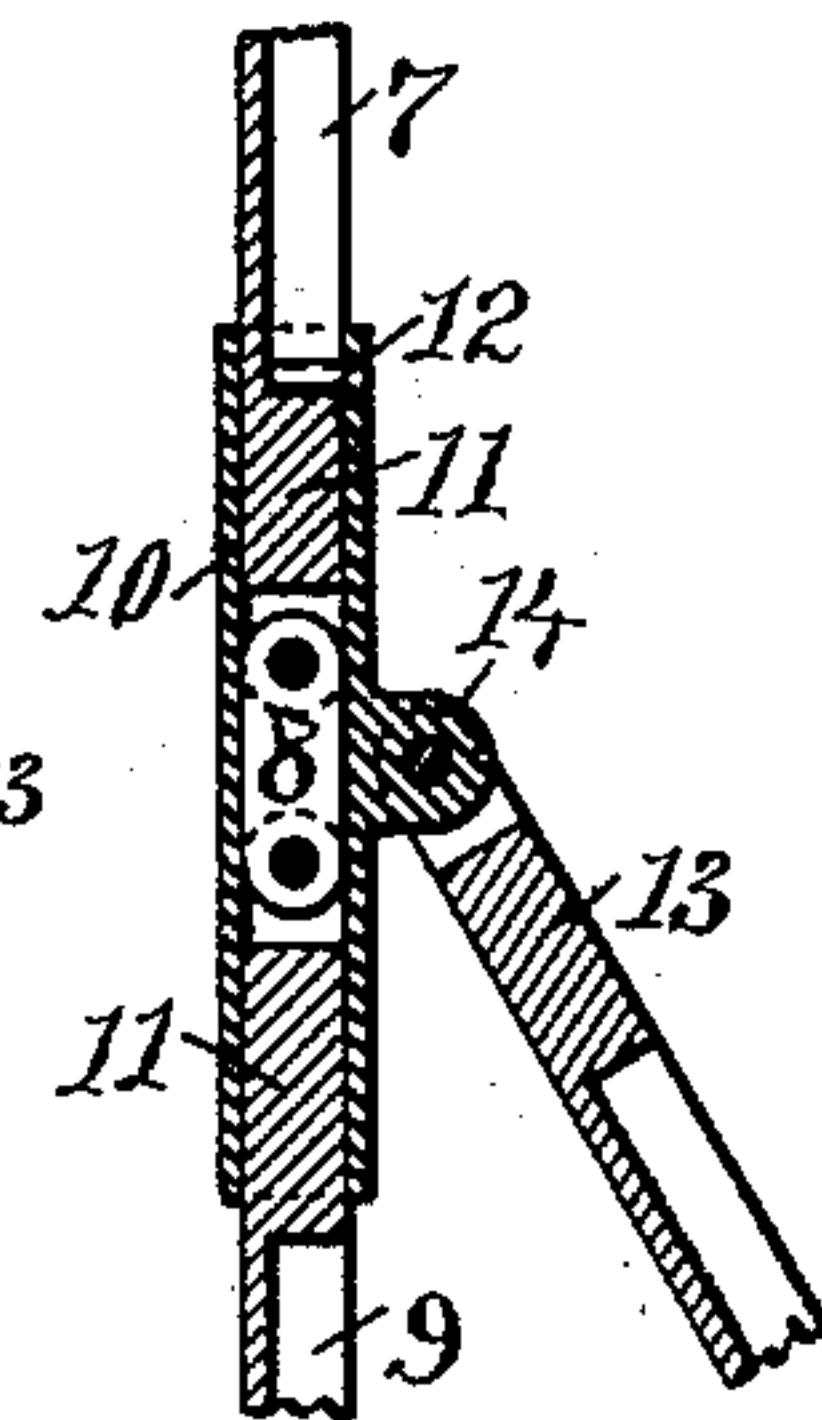


Fig. 3.



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UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 435,735, dated September 2, 1890.

Application filed October 31, 1889. Serial No. 328,815. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DILL, of Bristol, in the county Bristol and State of Rhode Island, have invented a new and useful Improvement in Umbrellas; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the construction of umbrellas designed to be folded into a small and compact form; and it consists in the peculiar and novel construction of the ribs and the slides, as also their connection with the braces and the jointed stick, as will be more fully set forth hereinafter.

The object of the invention is to so construct an umbrella that the same can be folded and doubled so as to be readily placed into a traveling-bag and occupy only half the length of the umbrella when in use.

Figure 1 is a view, partly in section, of my improved umbrella-frame. Fig. 2 is a view, partly in section, showing the umbrella-frame and stick folded. Fig. 3 is a sectional view showing the hinged portion of one of the umbrella-ribs and the connection with the brace.

Similar numbers of reference indicate corresponding parts throughout.

In the drawings, the number 4 indicates the umbrella-stick, near the pointed end 5 of which the hinge-block 6 is secured, in which one end of each of the ribs 7 is pivotally secured. The ribs 7 are made up of two lengths secured together near the middle of their length by the link 8, hinged in the adjoining ends of the parts 7 and 9, so that the projecting part 9 of the ribs may be folded over the ribs 7, as is shown in Fig. 2. This joint is made rigid when the umbrella is to be expanded by sliding the sleeves 10 over the hinged joint, so that the sleeves extend over and inclose a part of the adjoining end of the ribs 7 and the projecting ends 9, as is shown in Fig. 1 and more clearly in section in Fig. 3.

The ribs shown are the usual steel ribs of U-shaped section. The ends which are to be secured together are provided with the hinge-block 11, and to this the link 8 is secured by pins. The sleeve 10 is provided with the stop-pin 12, which slides in the groove

of the U-shaped ribs. When the sleeve is drawn out, the pin 12 holds the sleeve in the position where it extends over the two adjacent hinged ends of the ribs, and when the umbrella is extended holds the sleeves securely in this position, so as to form a thrust for the radial braces 13, hinged at one end to the bracket 14, secured to the sleeve 10. The other ends of the radial braces 13 are hinged on the sleeve 15, which slides on the umbrella-stick.

The umbrella-stick is made in two parts. The stick portion 4 and the handle portion 16 are hinged together by the link 17, so that the same may be folded and doubled, as is shown in Fig. 2. The sleeve 18 when pushed beyond the spring 19 holds the two parts of the umbrella-stick rigidly in the straight position. The spring 20 supports the sleeve 15 when the umbrella is expanded.

21 is a stop for the sleeve 15.

When the umbrella is expanded, the radial braces 13 bear on the sleeve 10, forcing the same outward, the stop-pin 12 bearing against the block 11. When the umbrella is to be folded, the sleeves 15 and 18 are drawn toward the handle until the ribs are folded close to the stick. By grasping the radial braces 13 in one hand the sleeves 10 can be pushed to the hinged end of the ribs 7. The ends 9 of the ribs can now be folded over, as is shown in Fig. 2, and the handle folded, as shown. The silk or other textile covering is secured in the usual manner around the stick 4 beyond the hinge-block 6, and to each one of the ribs at 22 a point beyond the extreme outward position of the sleeves 10 and also at the extreme outer end of the ribs 23, the portion 7 of the ribs being unobstructed, so as to permit the sleeves to slide freely on the same. When folded, the umbrella can be packed into a traveling-bag or trunk, being in the folded condition about half the length of the extended umbrella.

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

1. In an umbrella, the combination, with a stick made in two parts jointed by a double-link hinge, of ribs made in two parts and hinged together at or about the middle of their length, radial braces hinged to a sliding

sleeve and to sleeves on the ribs, and the sleeves 10, provided with the stop-pin 12, the whole constructed to fold and double the umbrella, as described.

- 5 2. An umbrella consisting of the stick made in two lengths secured together by the link 17, the stop 21, springs 19 and 20, the sleeve 18, the hinge-block 6, and ribs 7 and 9, hinged to the block 6 and connected by the link 8, the

hinge-blocks 11, secured in the grooves of the ribs, the sleeves 10, each provided with the stop-pin 12, the braces 13, and sleeve 15, constructed to open and close the umbrella and permit of the folding of the same, as described.

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Witnesses:

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