



[54] ILLUMINATING UMBRELLA HAVING RELIABLE CONNECTING WIRES

[57] ABSTRACT

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An illuminating umbrella includes a top illuminator fixed on a top end of an umbrella central shaft, and a plurality of tip illuminators respectively fixed on a plurality of tips of the top ribs of the umbrella. Each illuminator has a positive wire electrically connected to a positive conducting ring secured on an outer peripheral portion of an umbrella notch or ferrule formed on an upper end of the central shaft, and a negative wire electrically connected to a negative conducting ring embedded on the central shaft which serves as a negative conductor. The positive conducting ring is electrically connected to a positive pole of a power source, of which the negative pole is electrically connected to the central shaft through an on-off switch slidably held on a grip of the shaft thereby forming a reliable stable power connection circuit among the illuminators and the power source. A flasher is connected between the power source and the illuminators for flashing the illuminators when turned on.

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[22] Filed: Sep. 18, 1998

[51] Int. Cl.<sup>7</sup> ..... A45B 3/02

[52] U.S. Cl. .... 362/102; 362/800; 135/910

[58] Field of Search ..... 362/102, 800, 362/184; 135/16, 910

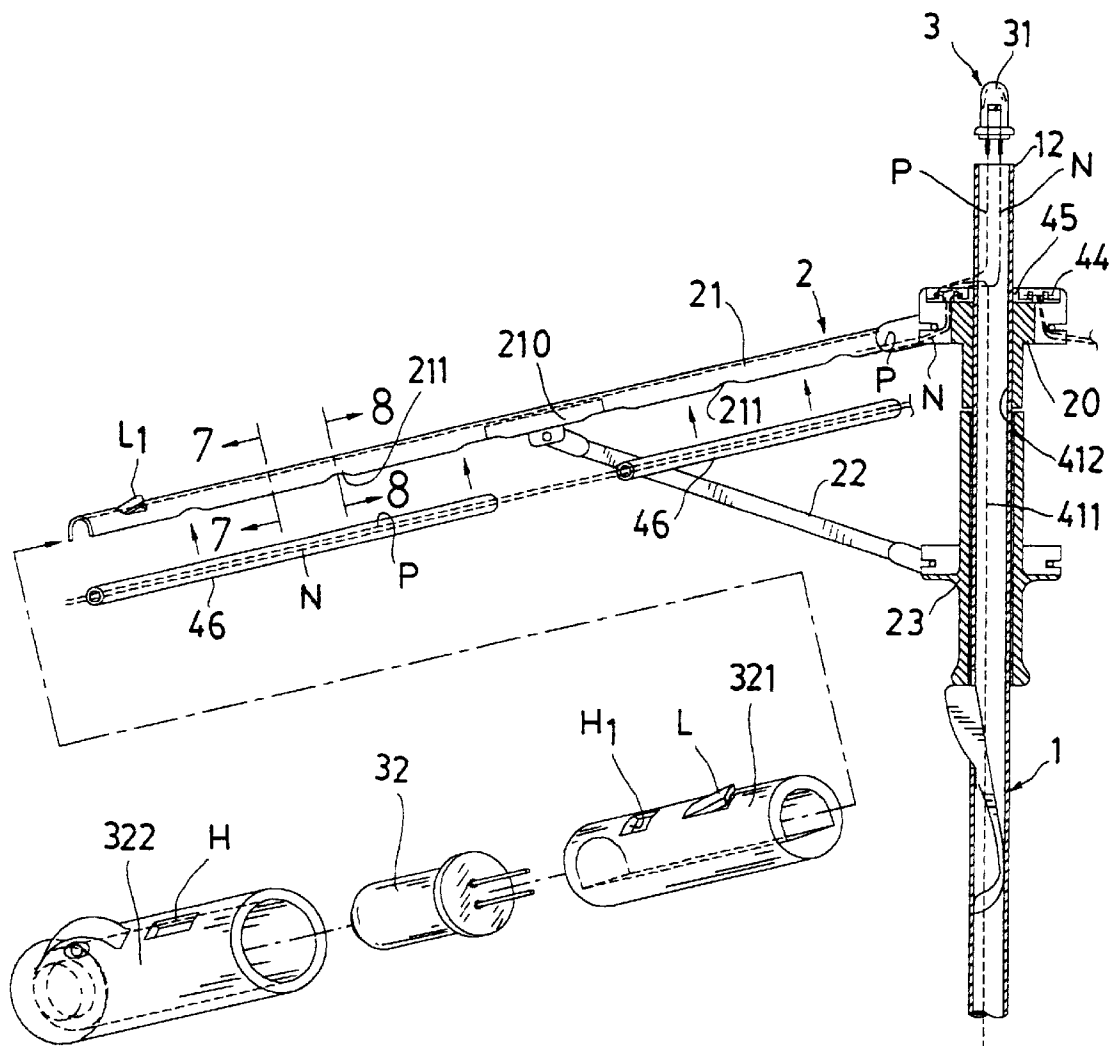
[56] References Cited

U.S. PATENT DOCUMENTS

5,323,798	6/1994	Yang	.....	362/102
5,502,624	3/1996	Tu	.....	362/102

Primary Examiner—Thomas M. Sember

8 Claims, 8 Drawing Sheets



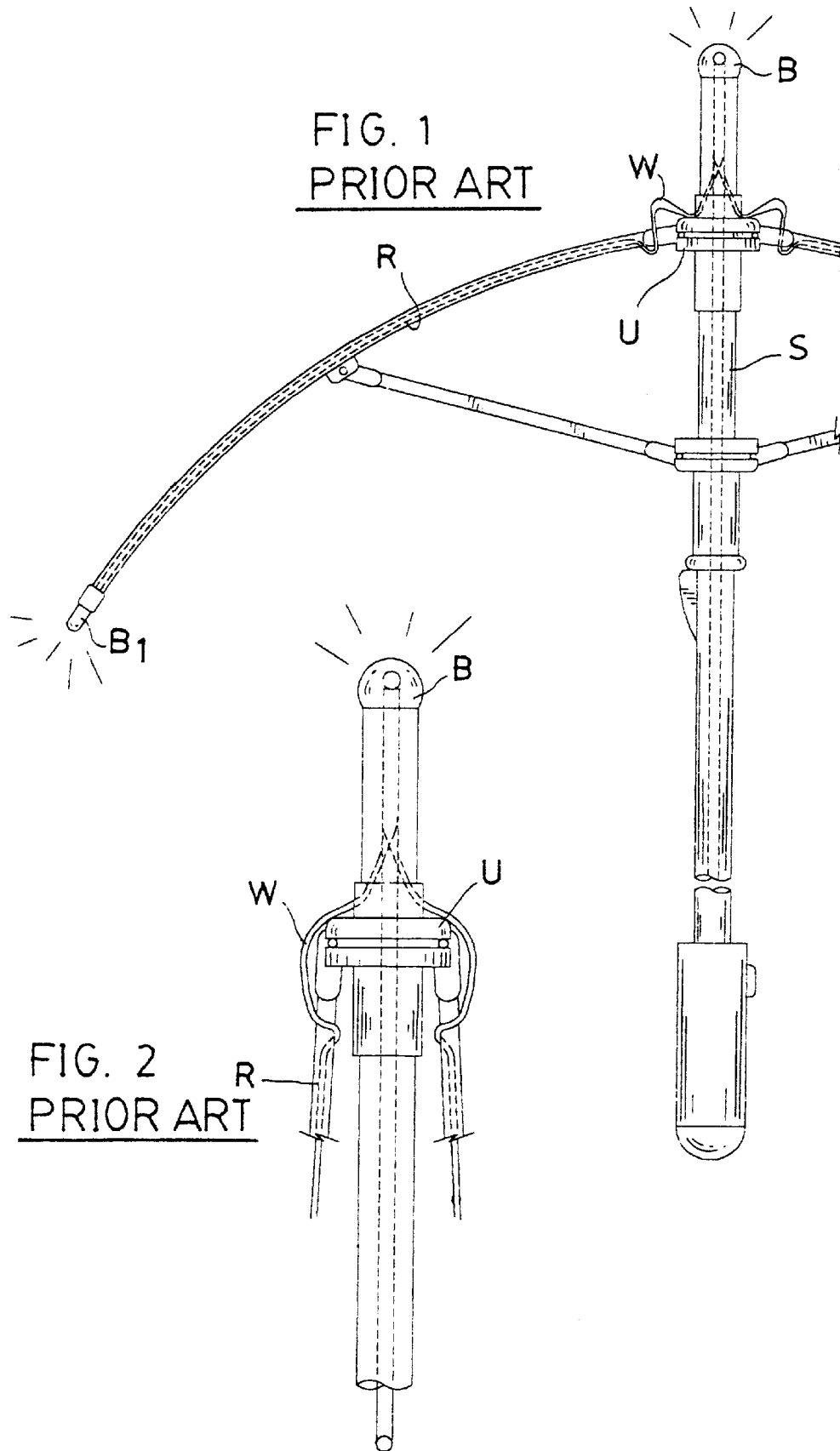


FIG. 3  
PRIOR ART

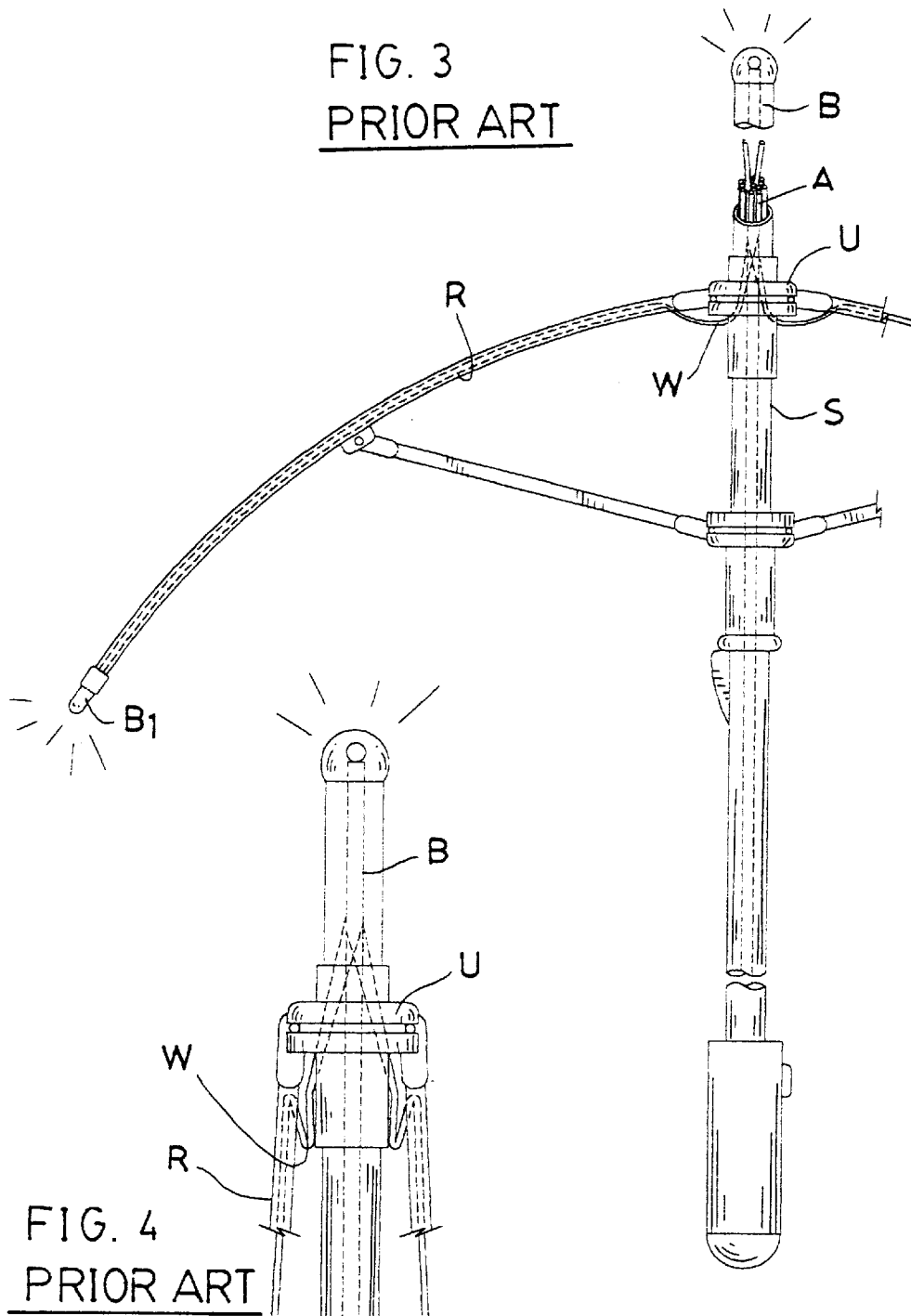
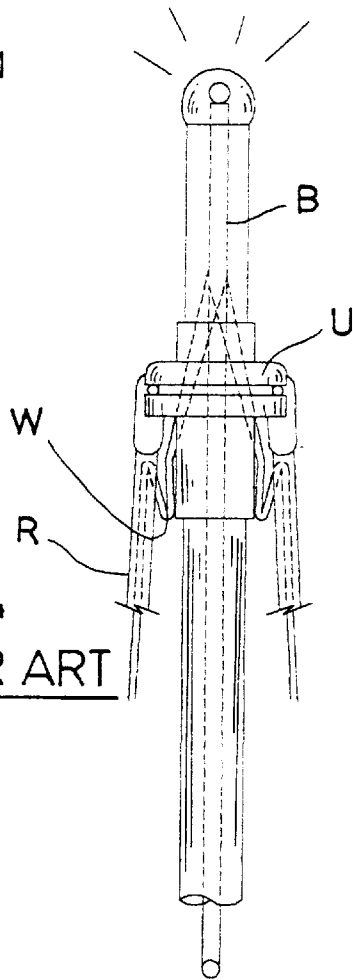
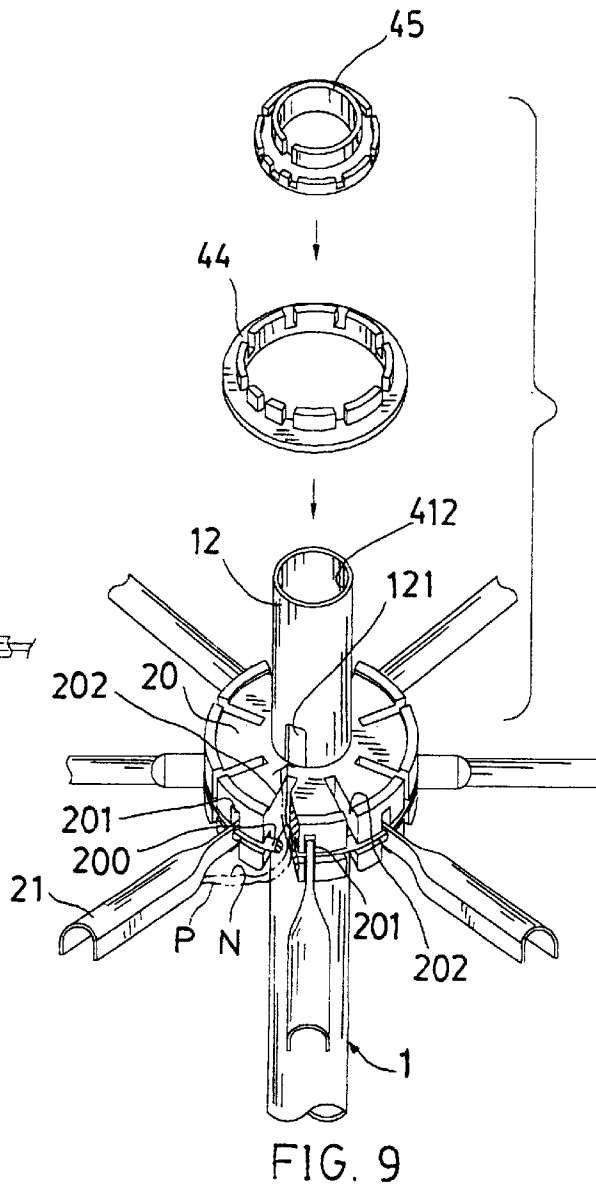
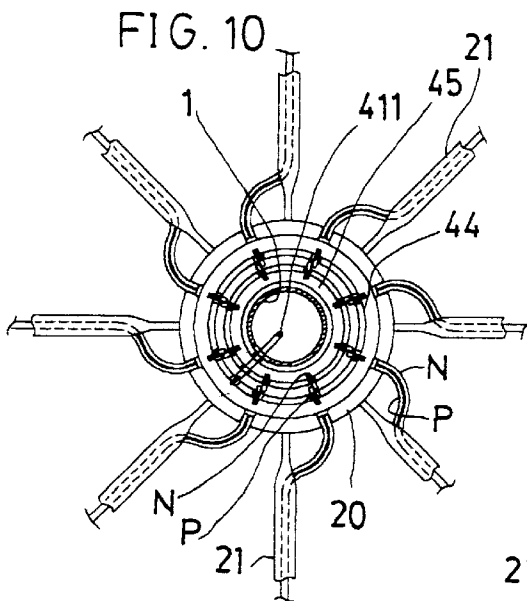
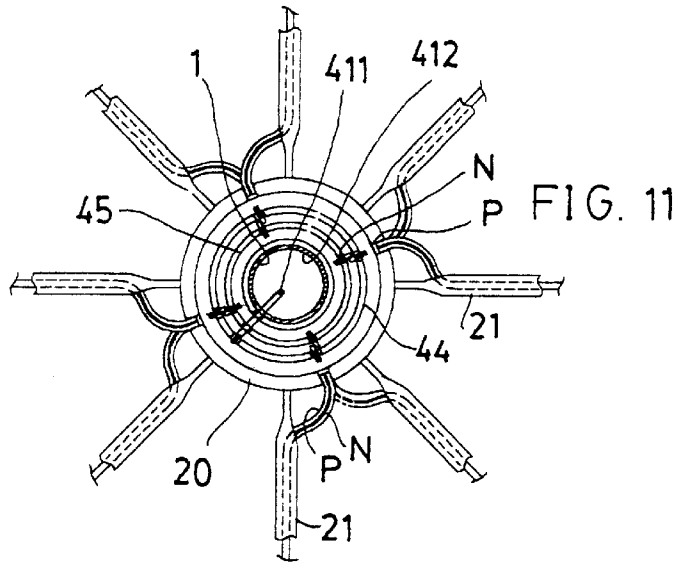


FIG. 4  
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