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(54) FOLDING PARASOL

The invention relates to a folding parasol. The inventive parasol comprises a sunshade surface (1) which is fixed to bars which are in turn connected to a bushing (16) by means of lower arms, said bushing being equipped with a locking button (17). According to the invention, the bushing (16) can slide axially in relation to an upper rod (2) of the parasol, which can be inserted into a lower ground-fixing rod (3) by means of a heightadjustment element (6). The aforementioned bars comvarious different articulated segments prise (19,20,21,24,25,26,27,32,33), while the rods (2,3) comprise various different tongue-and-groove or telescopic segments (4,5,7,8,9,10,28,29,30,31). In this way, the parasol can be folded such as to occupy very little space.

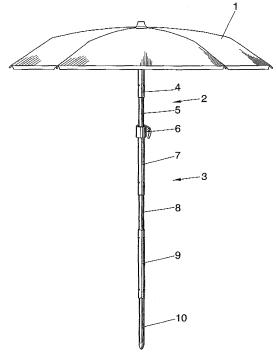


FIG. 1

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OBJECT OF THE INVENTION

[0001] This invention, as detailed in the title of this specification, concerns a folding parasol aimed at providing a parasol like those used on the beach, but with collapsible and folding components to take up far less space and so that it can be carried easily in the right bag.

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BACKGROUNDOF THE INVENTION

[0002] Beach parasols with a sunshade surface attached to spars connected to lower arms with a bushing with a locking button on them are well known. This bushing moves axially to the upper rod of the parasol, which, in turn, slots into a lower rod that holds it in place in the ground with a height-adjustment element.

[0003] These well-known parasols have certain disadvantages in that they are too big in size due to the broad surface area of shade that they must provide; so that even if the parasol is folded up, it takes up a lot of space and it is not easy to carry.

DESCRIPTION OP THE INVENTION

[0004] To achieve the objectives and overcome the disadvantages indicated in previous paragraphs, the invention consists of a folding parasol with the sunshade surface attached to spars connected to lower arms with a bushing with a locking button on them are well known. This bushing moves axially to the upper rod of the parasol, which, in turn, slots into a lower rod that holds it in place in the ground with a height-adjustment element.

[0005] The difference with this invention is that the aforesaid spars have several articulated segments, while the aforesaid rods have several telescopic segments, or segments that slot into each other, so that the parasol can be folded and unfolded and it takes up very little space.

[0006] According to the embodiment of the invention, each of said spars has a first segment that articulates with the top part of the upper rod at one end, and the other end articulates with the central part of the lower arm. An area close to this other end articulates with the first end of a second segment of the spar, the opposite end of which articulates with the end of a third and final segment of spar. Close to this end of the third segment of the spar, there is a joint with the outermost end of said lower arm, while the innermost end of said arm joins to the axially moving bushing.

[0007] According to another embodiment of the invention design, each of said spars has a first segment that articulates with the upper part of the upper rod, via one end, while the other end articulates with one end of a second segment of spar, and the central zone joins the central joint of a lower arm made up of two articulated segments. The innermost end of the first segment of this

arm is joined to the axially moving bushing, while the outermost end of the second segment of said arm articulates with the second segment of spar at an area close to said first end. There is another articulation point in the second segment of the aforesaid arm that is close to the outermost end of this, and which connects with the first end of a third segment of spar that runs approximately parallel to the second segment of spar, the end of which articulates with the innermost end of the fourth segment of spar. Close to this innermost end of the fourth segment of spar, there is another articulation point that connects to the other, or outermost, end of the second segment of the spar.

[0008] In accordance with another embodiment of the invention, each of these spars has a first segment that articulates with the upper part of the upper rod via the innermost end, and the central area joins to the outermost end of the lower arm and the outermost end joins to a second segment of the spar, with the innermost end of the aforesaid arm joined to the axially moving bushing. In this embodiment, the aforesaid articulation of the central part of the first segment of the spar and the articulation of the outermost end of this first segment of the spar include a first hinge-elbow joint and a second hinge-elbow joint respectively, so that near the outermost end of the second segment of the spar, there is a sewn anchoring element to fix it to the sunshade surface.

[0009] Moreover, in the different embodiments, the upper rod can be arranged with a first segment in which the spars articulate and to which said bushing is fixed, and a second segment that can be screwed in to the first segment; so that the lower rod can be made up of a first segment that includes the height-adjustment element and a second segment that screws into the first one. This layout of the different segments of the upper and lower rods can be varied for other embodiments.

[0010] According to the invention, an independent bag can be made available, fitted with an upper compartment with the corresponding handles fixed to the mouth, for holding the sunshade surface set with the spars folded and without the telescopic or screw together upper and lower segments of the rod; and fitted with a lower compartment with a lateral zip for keeping said segments that fit together.

[0011] Embodiments have been made in which the spars of the parasol are arranged in an arrangement of eight, so that the contour of the perimeter of the sunshade surface is octagonal in shape; and embodiments with four spars, providing a rectangular or square perimeter to the sunshade surface, depending on whether the angle between each spar varies or remains constant.

[0012] With this arrangement, the parasol of the invention has the advantages that the set of spars can be folded or unfolded, thus taking up very little space, and that the segments of the parasol rod can be broken down into several different segments, which also means that the parasol as a whole, when folded away, takes up very little room. Moreover, all these pieces of the unassembled

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and folded away parasol can be kept in a relatively small bag, making it much easier to carry the parasol.

[0013] To provide a better understanding of this descriptive report, below is another, integral part of said report, containing figures that illustrate, rather than exhaustively describing, the object of the invention.

BRIEF DESCRIPTION OF THE FIGURES

[0014]

Figure 1. This represents a side view of a folding parasol when deployed, with all the pieces assembled and ready for sticking in the ground.

Figure 2. This represents the top of the parasol mentioned in the previous figure, once that the corresponding spars have been folded.

Figure 3. This represents a view of a suitable bag for carrying the component parts of the invented parasol.

Figure 4. This is a side view of a first embodiment of a folding spar for the invented parasol, with said spar deployed.

Figure 5. This represents a side view of the parasol spar of figure 4 above, once it has been folded.

Figure 6. This is a second embodiment of a folding spar for this parasol, with said bar in the deployed position.

Figure 7. This is a side view of the spar of figure 6 above, once this has been folded.

Figure 8. This is a side view of a third embodiment of a folding spar for this parasol, with said spar in the deployed position.

Figure 9. This represents a side view of the spar in figure 8 above, once this has been folded.

Figure 10. This is a side view of a folding parasol, deployed, according to this invention, with all its component parts assembled and ready for sticking in the ground, similar to the figure in figure 1 above, but with a different layout of segments in the rods.

DESCRIPTION OF ONE OR SEVERAL SAMPLE BM-BODTMENTS OF THE INVENTION

[0015] Below is a description of three examples of embodiments of the invention, referring to the numbering system used in the figures above.

[0016] Thus, in all these embodiments, the parasol has a sunshade surface 1 attached to spars that are connected to lower arms by a bushing 16 fitted with a locking button 17.

[0017] The bushing 16 moves axially to the upper rod 2 of the parasol in all embodiments, and this fits into a lower rod that sticks into the ground 3, using a height-adjustment element 6; as seen in figure 1.

[0018] Also in all embodiments, the aforesaid upper rod 2 can be made up of two segments 4,5 that slot into each other, while the lower rod 3 can be made up of four

segments 7, 8, 9, 10 that slot together; as seen in figure 1. On the other hand, as can be seen in figure 10, and also in all embodiments, the upper rod 2 can be made up of a first segment 28 where the spars articulate and along which said bushing 16 moves, and a second segment 29 that screws into the previous first segment 28so that the lower rod 3can be made up of a first segment 30 that includes the height-adjustment element 6and a second segment 31 that screws into it.

[0019] In all embodiments, the spars that support the sunshade surface 1 of the parasol are jointed and folding, so that the parasol as a whole, once taken apart and folded away, can be placed in a separate bag 11, as shown in figure 3.

[0020] Said bag 11 is fitted with an upper compartment 13 with the corresponding handles attached to the mouth 12 for holding the sunshade surface 1 set with the spars folded and without the connecting segments of the upper 2and lower 3rods. Moreover, said bag 11 is fitted with a lower compartment 14 with a side zip 15 for holding said connecting segments of rods 2 and 3.

[0021] According to a first embodiment of the invention, shown in figures 4 and 5, each of the aforesaid bars has a first segment 19, with one end that joins to the upper part of the upper rod 2, and a second end that joins to the central part of a lower arm 18, and to a spot close to this end joins to the end of a second segment of the spar 20, the opposite end of which articulates with the end of a third and final segment of the spar 21. Close to this end of the third segment of the spar 21, there is an articulation with the outermost end of the aforesaid lower arm 18, while the innermost end of said arm 18 articulates with the axially moving bushing 16. This configuration allows for the spars to fold and unfold, as represented in figures 4 and 5.

[0022] According to a second embodiment of the invention, shown in figures 6 and 7, each of said spars has a first segment 24 that articulates with the upper part of the upper rod 2 via one end, and the other end articulates with one end of the second segment of the spar 25 and the centre articulates with the central articulation of a lower arm made up of two articulated segments 22,23. The innermost end of the first segment 22 of said arm joins to the axially moving bushing 16, while the outermost end of the second segment 23 of said arm articulates with the second segment of the spar 25 close to the first end mentioned above. Furthermore, there is another point of articulation in the second segment 23 of the aforesaid arm that joins close to the outermost end and connects to the first end of a third segment of the spar 26 that runs approximately in parallel to the second segment of spar 25, the other end of which, articulates with the innermost end of a fourth segment of spar 27. Close to this innermost end of the fourth segment of spar 27, there is another articulation point that connects to the other end, or outermost end, of the second segment of the spar 25. With this configuration, the spar of this second embodiment can be folded and unfolded as shown

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in figures 6 and 7.

[0023] In a third embodiment of the invention, shown in figures 8 and 9, each of these spars has a first segment 32 that joins the innermost end to the upper part of the upper rod 2, the central part articulates with the outermost end of a lower arm 34 and the outermost end articulates with a second segment of spar the 33, articulating the innermost end of said arm 34 with the axially moving bushing 16. In this third embodiment, said articulation of the central part of the first segment of the spar 32 and the articulation of the outermost end of this first segment of the spar 32, include a first elbow joint-hinge 35 and a second elbow joint-hinge 36, respectively. Moreover, in this third embodiment of the invention, close to the outermost end of the second segment of the spar 33, there is a sewn anchoring point 37 to attach the sunshade surface 1 of the parasol.

[0024] The preferred number of spars for the parasol is eight or four, providing an octagonal-shaped parasol in the former case and a rectangular or square shaped parasol in the latter.

[0025] On the other hand, the parasol of this invention can be mated with an accessory tripod to hold it on surfaces on which the lower rod 3 can not be stuck into the ground.

Claims

- 1. FOLDING PARASOL, with a sunshade surface (1) attached to a set of spars connected by lower arms with a bushing (16) fitted with a locking button (17); and this bushing (16) moves axially to the upper rod (2) of the parasol, which slots into a lower rod to stick into the ground (3), using a height-adjustment element (6); characterized in that said spars have several articulated segments (19,20,21, 24,25,26,27, 32,33), while said rods (2,3) have several segments that slot into each other, or are telescopic (4,5,7,8,9,10,28,29,30,31), so that the parasol can be folded up so as to take up very little space.
- 2. FOLDING PARASOL, according to claim 1, characterized in that each of said spars has a first segment (19), one end of which articulates with the upper part of the upper rod (2), and the other end of which articulates with the central part of a lower arm (18) and a spot close to this other end articulates with one end of a second segment of the spar (20), the other end of which articulates with the end of a third and final segment of the spar (21). Close to this end of the third segment of the spar (21), there is an articulation with the outermost end of said lower arm (18), while the innermost end of said arm (18) articulates with the bushing (16) that moves axially.
- 3. FOLDING PARASOL, according to claim 1, characterized in that each of said spars has a first seg-

ment (24), the end of which articulates with the upper part of the upper spar (2), and the other end that articulates with the end of a second segment of the spar (25) and the central part is joined to the central articulation of a lower arm made up of two articulated segments (22,23); of which the innermost end of the first segment (22) of this arm articulates with the axially moving bushing (16), while the outermost end of the second segment (23) of said arm articulates with the second segment of the spar (25) close to said first end. There is another point of articulation in the second segment (23) of the aforesaid arm that is close to the outermost end, which connects to the first end of a third segment of spar (26) that runs approximately parallel to the second segment of the spar (25), the other end of which articulates with the innermost end of a fourth segment of the spar (27). There is another point of articulation close to this innermost end of the fourth segment of spar, which connects to the other end, or outermost end, of the second segment of the spar (25).

- 4. FOLDING PARASOL, according to claim 1, characterized in that each of said spars has a first segment (32), the innermost end of which articulates with the upper part of the upper rod (2), the central part articulates with the outermost end of a lower arm (34) and the outermost end articulates with a second segment of the spar (33), and the innermost segment of the aforesaid arm (34) articulates with the axially moving bushing (16).
- 5. FOLDING PARASOL, according to claim 4, characterized in that said articulation of the central part of the first segment of the spar (32) and the articulation of the outermost end of this first segment of spar (32) include a first elbow joint-hinge (35) and a second elbow joint-hinge (33) respectively.
- 40 6. FOLDING PARASOL, according to claim 4, characterized in that close to the outermost end of the second segment of the spar (33), there is a sewn attachment point (37) for holding the sunshade surface (1) of the parasol.
 - 7. FOLDING PARASOL, according to claim 1, characterized in that the upper rod (2) is made up of a first segment (28) where the spars articulate and along which said bushing (16) moves, and a second segment (29) that slots into the first segment (28); and the lower rod (3) is made up of a first segment (30) that includes the height-adjustment element (6) and a second segment (31) that screws into it.
- 8. FOLDING PARASOL, according to claim 1, characterized in that it has a separate bag (11) fitted with an upper compartment (13) with handles attached to the mouth (12) for holding the sunshade

surface (1) set with the spars folded and without the segments of the upper and lower rods (2,3) that slot into each other; and fitted with a lower compartment (14) with a side zip (15) for holding said segments that slot into each other.

9. FOLDING PARASOL, according to claim 1, characterized in that said spars are eight in number, so that the sunshade surface (1) of the parasol presents an octagonal perimeter.

10. FOLDING PARASOL, according to claim 1, **characterized in that** said spars are four in number, so that the sunshade surface 1 presents a rectangular or square perimeter.

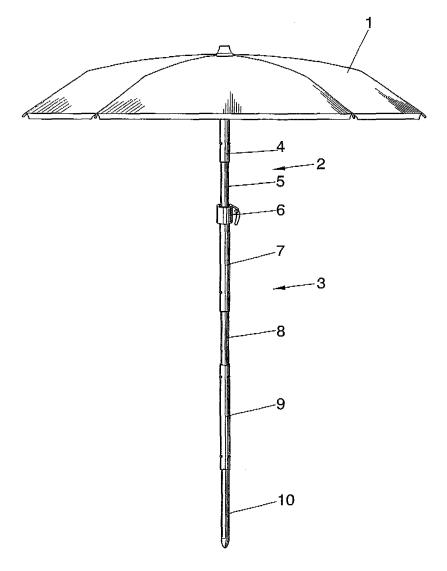
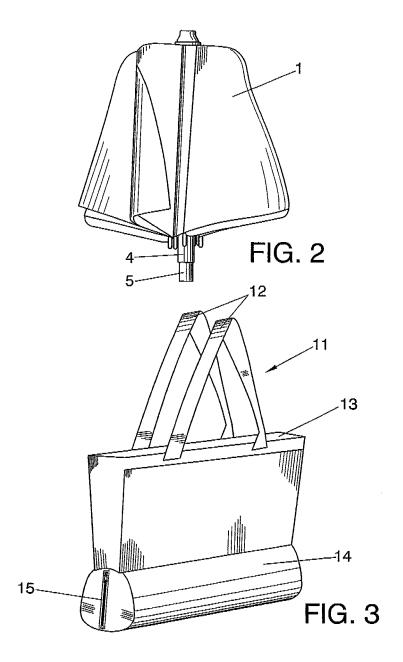
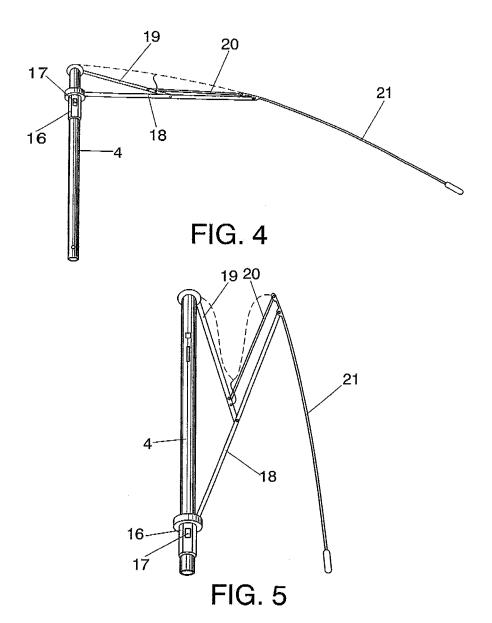
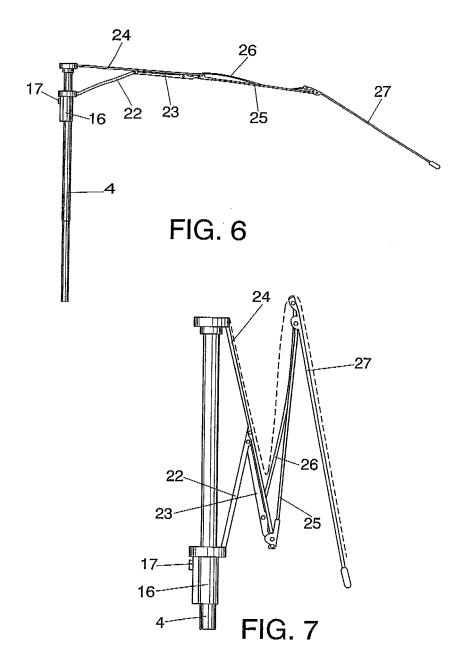
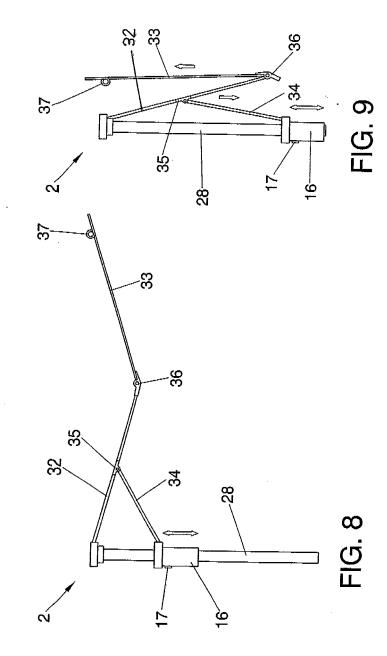


FIG. 1









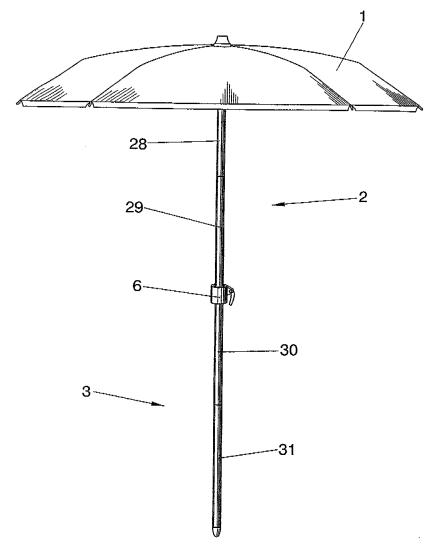


FIG. 10

INTERNATIONAL SEARCH REPORT

International application No. PCT/ ES 2005/000126

		PCT/ ES	2005/000126
A. CLAS	SIFICATION OF SUBJECT MATTER		
	A45B 19/04, 19/10, A45B 25/00 International Patent Classification (IPC) or to both	national classification and IPC	
	DS SEARCHED		
Minimum do	cumentation searched (classification system followed by	classification symbols)	
IPC 7 A	.45B		
Documentation	on searched other than minimum documentation to the e	xtent that such documents are included in	the fields searched
Electronic dat	ta base consulted during the international search (name of	of data base and, where practicable, searc	n terms used)
EPOQ	UE, MISTRAL, WPIL, PAJ		
C. DOCUM	MENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where ap	ppropriate, of the relevant passages	Relevant to claim No.
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X	DE-10129578-C1 (FU TAI UMBRI The abstract; figures	ELLA WORKS LTD)12.09.200	1, 2
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▼ Further	r documents are listed in the continuation of Box C.	See patent family annex.	<u> </u>
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Information on patent family members

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