United States Patent

Bernardi

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[54] COLLAPSIBLE BEACH-UMBRELLA

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[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** ..... **135/5 R,** 160/24, 160/26

[51] **Int. Cl.** **E04f 10/06**

[58] **Field of Search** ..... 135/5 R, 5 A, 7.1; 160/24, 160/26, 31, 33, 377

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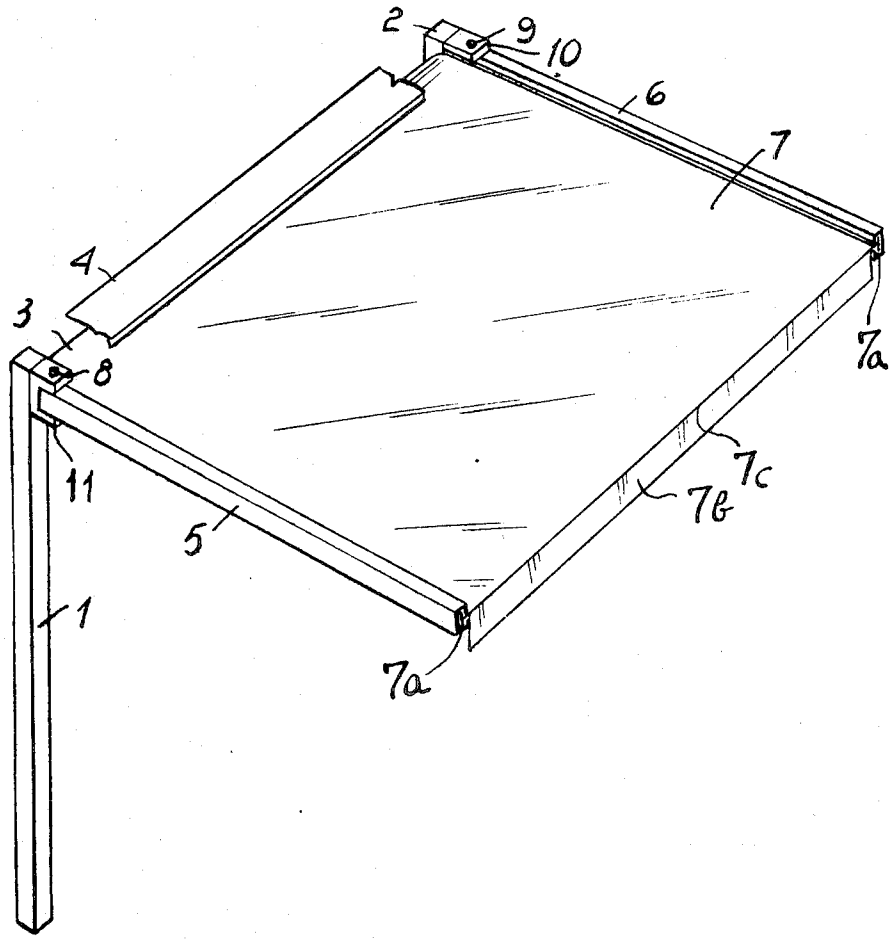
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[57] **ABSTRACT**

Collapsible beach-umbrella with a bearer structure for an awninglike shade and at least one pole adapted to be fixed on the ground for supporting said bearer structure, characterized in that said bearer structure includes at least one roller shade unit supported on said pole, at least one elongated bearer guide for guiding and retaining said shade in stretched condition, at least one of said bearer guides having one end thereof hingedly connected with said roller-shade unit and having stop means retaining said bearer guide in a cantileverwise extended position with respect to said pole.

7 Claims, 7 Drawing Figures



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SHEET 1 OF 2

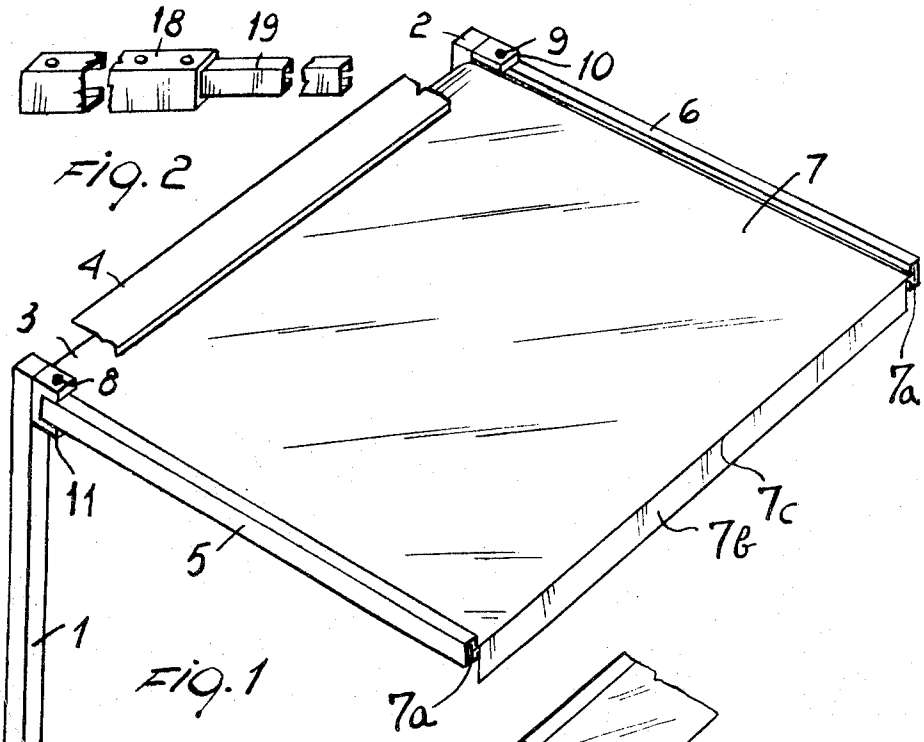


FIG. 2

FIG. 1

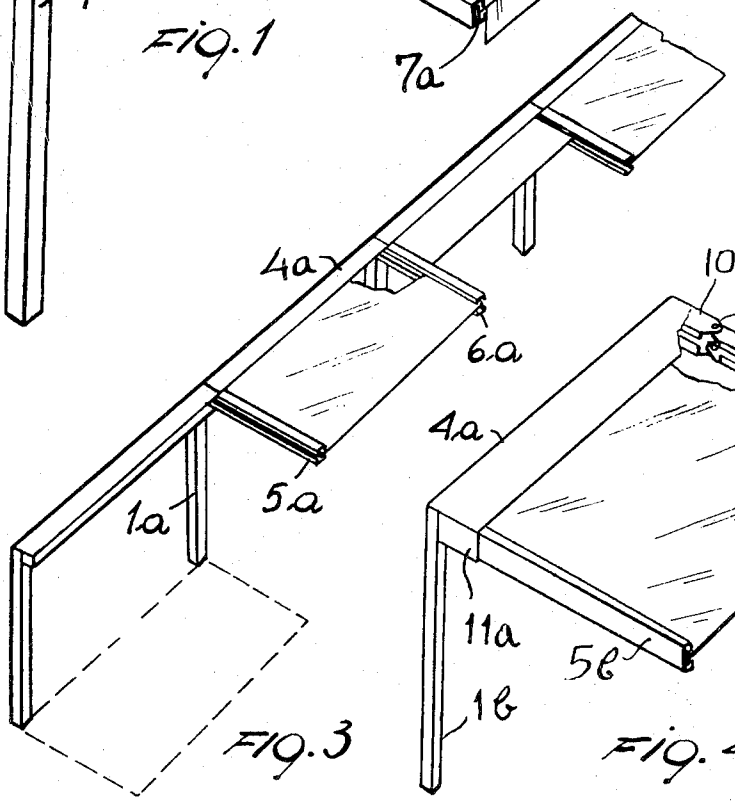


FIG. 3

FIG. 4

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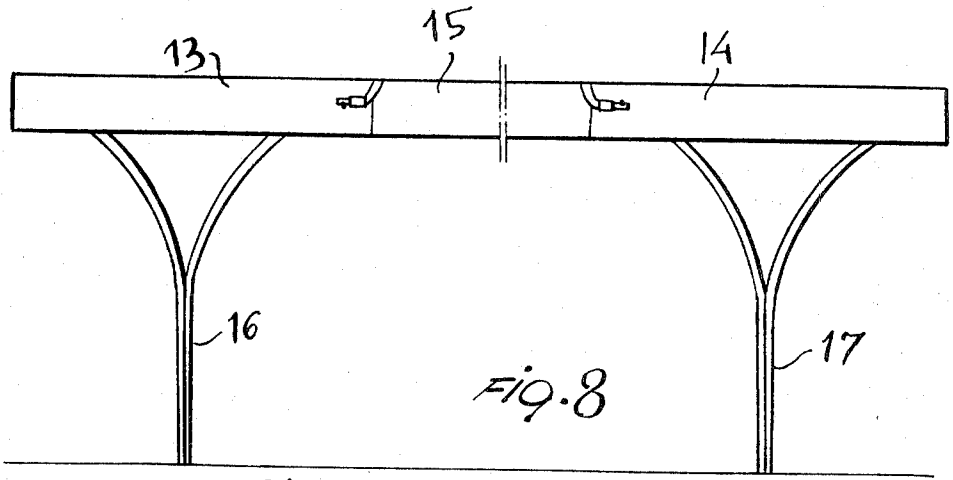


Fig. 8

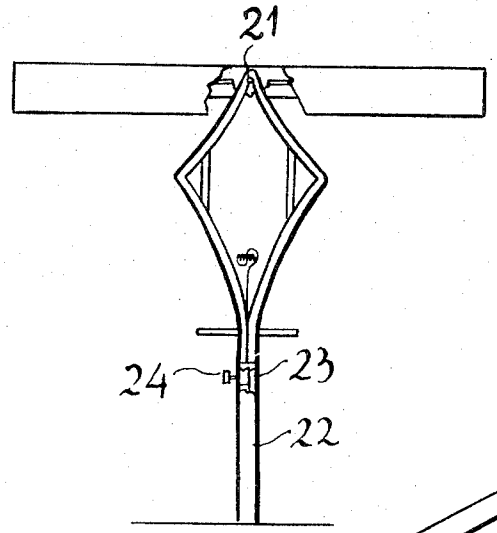


Fig. 7

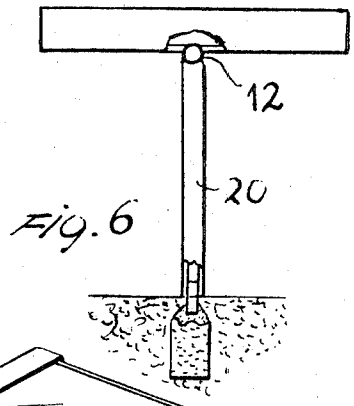


Fig. 6

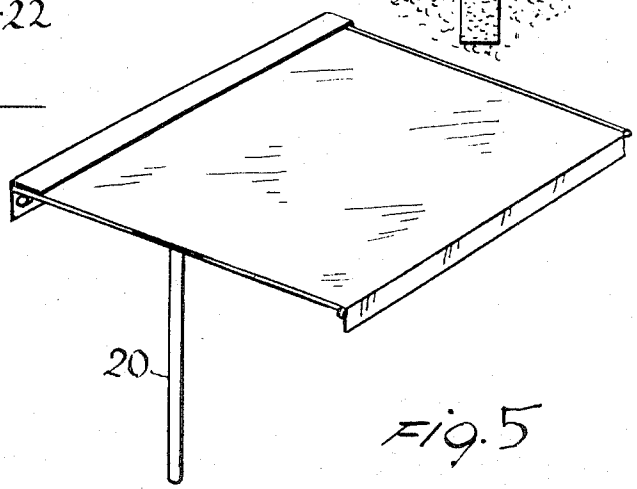


Fig. 5

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COLLAPSIBLE BEACH-UMBRELLA

BACKGROUND OF THE INVENTION

This invention relates to a collapsible beach-umbrella with a bearer structure for an awninglike shade and at least one pole adapted to be fixed on the ground for supporting said bearer structure.

The conventional beach-umbrellas have a shade structure with respect to which the supporting pole is arranged in a central position. Such central position of the pole has the disadvantage that, especially at midday, the shadow provided by the beach-umbrella extends over the area where the pole is fixed on the ground, so that only a limited portion of the shadow provided by the umbrella may be used.

Furthermore, in collapsed condition of the known beach-umbrellas the awning cloth has to be plied and therefore occupies substantial space, so that the umbrella is cumbersome in such collapsed conditions.

SUMMARY OF THE INVENTION

An object of the invention is to obviate the above disadvantages, by providing a collapsible beach-umbrella, the pole of which could be fixed on the ground in a position outside the shadow area provided by the umbrella, in any daylight conditions.

Another object is to allow a rapid packaging of the awning cloth of the beach-umbrella, such that in packaged conditions the awning cloth occupies a reduced space.

A further object of the invention is to provide the possibility of orientating the umbrella in a plurality of directions.

A still further object is to provide a beach-umbrella having a completely collapsible structure.

According to the invention, these and other objects which will appear more clearly from the detailed description which follows, are attained by a collapsible beach-umbrella with a bearer structure for an awninglike shade and at least one pole adapted to be fixed on the ground for supporting said bearer structure, characterized in that said bearer structure includes at least one roller shade unit supported on said pole, at least one elongated bearer guide for guiding and retaining said shade in stretched condition, at least one of said bearer guides having one end thereof hingedly connected with said roller shade unit and having stop means retaining said bearer guide in a cantileverwise extended position with respect to said pole.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing,

FIG. 1 shows a perspective view of one embodiment of the collapsible beach-umbrella according to the invention in erected position.

FIG. 2 shows a fragmented view, partially exploded, of detail;

FIG. 3 shows a perspective view from above o f a modified embodiment of the beach-umbrella.

FIG. 4 shows a perspective view from above of a further modified embodiment.

FIG. 5 shows a perspective view from above of an embodiment of the beach-umbrella with a single pole;

FIG. 6 is a rear view of the embodiment shown in FIG. 5, partially in section;

FIG. 7 is a rear view of a modified embodiment of a single-pole beach-umbrella;

FIG. 8 is a rear view of a composite beach-umbrella.

DESCRIPTION OF PREFERRED EMBODIMENTS

With reference to FIG. 1, the beach-umbrella shown comprises two poles 1 and 2, which are fixed in known manner on the ground. The upper ends of the poles 1 and 2 are connected by a roller-shade unit 3 of per se known type, which is automatically wound-up by the action of a loaded coil spring (not shown). The casing 4, which houses the roller-shade unit is shown fragmented at its end for the sake of clarity. The housing 4 may be fixed with its ends on the top of the poles 1 and 2 and may be provided with the seats (not shown) at its ends, in which the roller (not shown) of the roller-shade unit 3 is rotatably supported in per se known manner. The casing 4 may also be omitted and in such case the seats for the roller of the roller-shade unit are provided at the top of the poles 1 and 2. On the top of the poles 1 and 2 fork elements 10 and 11 are fixed, in which hinges 9 and 8 are provided, respectively for bearer guides 5 and 6. The hinge axes of the hinges 8 and 9 are preferably parallel to the poles 1 and 2 and allow rotation of the bearer guides 5 and 6 in a plane transverse to the poles 1 and 2. The bearer guides 5 and 6 have a channellike cross section or C-like cross section with the open slots thereof turned towards each other. The awning cloth 7 of the shade is provided at its lateral borders with spaced slider elements 7*a*, which are guided within the channellike bearer guides. The sliders 7*a* may be replaced by a slightly ribbed rim. It will be understood that, in its wound-up position, the front end 7*b*, in the form of a flap, is positioned close to the top ends of the poles 1 and 2, beyond the hinges 8 and 9, so that the bearer guides 5 and 6 may be freely rotated about the hinges 8 and 9 and they may be thus disposed parallel to the roller-shade unit. In such collapsed position, the bearer guides 5 and 6 may be arranged in an overlapping relationship. For the purpose the hinge 9 may be slightly offset with respect to the hinge 8, i.e., the fork element 9, may be slightly longer or shorter than the fork element 8. In this way the overlapping allows a parallel arrangement of the guides 5 and 6 in collapsed position of the beach-umbrella. It will be understood that the sliders 7*a* or the ribbed rim of the awning cloth operate as stop elements for a diverging rotation of the guides 5 and 6, with respect to each other. The awning cloth 7 is advantageously provided at its front end 7*b*, with a reinforcing rod 7*c*, which prevents a mutually convergent rotation of the guides 5 and 6. In this way, no additional stop formations are necessary at the hinges 8 and 9, so that, when the awning cloth is wound-up, the guides 5 and 6 may freely rotate about their hinges. However, in more bust constructions stop formations (not shown) may be provided in the hinges 8 and 9, preventing rotation of the guides 5 and 6 beyond an angle of 90°. It will be understood that the embodiment of FIG. 1 may be provided with articulations allowing the tilting of the guides 5 and 6 also in vertical planes.

It will be further understood that bearer guides similar to those 5 and 6 may extend in a direction opposite to the guides 5 and 6 on the other side of the stop of the poles 1 and 2.

In addition, as shown in FIG. 2, the guides 5 and 6 may be made of telescoping elements such as 18 and 19, so that the length of these guides 5 and 6 may be extended at wish.

The embodiment of FIG. 3, shows a composite beach-umbrella of the type shown in FIG. 1. It will be understood that the intermediate bearer guides 5*a* and 6*a* have a double channel cross section opened at both opposite sides thereof, so that a single-bearer guide may serve for two contiguous awning clothes. The poles 1*a* and the casings 4*a* may be of the same type as shown in FIG. 1.

FIG. 4 shows a modification of the fork element 10*a* and hinge 9*a*, from which it may be noted that the channel shape of the guides 5*b* and 6*b* is assumed also by the fork elements 10*a* and 11*a*.

FIG. 5 shows an embodiment of the beach-umbrella with a single pole 20. The bearer guides shown in the embodiment of FIG. 1, may be replaced by a single central, detachable supporting rod, extending cantileverwise with respect to the pole 20 and adapted to support the awning cloth in its extended, cantileverwise position.

FIG. 6 shows an embodiment similar to that of FIG. 5 where the connection between the pole 20 and the roller-shade unit is made by a spherical or universal joint 12, which allows orientation of the shade in a plurality of directions.

The embodiment of FIG. 7 is similar to that of FIG. 6, with the exception of the hinge connection 21, between the roller-shade unit and the pole 22 and with the exception of the pole

22. In fact, the pole 22 has a bifurcated shape at the upper portion thereof and is made of two sections pivotally connected with each other at 23, a top screw 24 being provided to fix the relative position between the two sections of pole 22. Furthermore, the hinge connection 21 has an axis perpendicular to the pole 22, so that the roller-shade may be tilted in a vertical plane.

The embodiment of FIG. 8 shows a composite beach-umbrella made of two single-pole umbrellas of the previously described type but spaced from each other and having means suitable for mounting an intermediate roller-shade, between the roller-shades 13 and 14 of the single-pole beach-umbrellas 16 and 17.

In a further embodiment of the invention, the roller-shade unit, may be replaced by a rod connecting the top of the poles 1 and 2 of FIG. 1 and the channel-shaped guides 5 and 6 may be replaced by simple rods. In this embodiment an awning cloth is used, provided with a plurality of mutually spaced rings riding over the guides. The rings may be slid along the guides, whereby stretching the awning cloth when the rings are moved towards the free ends of the guides such as 5 and 6 and folding it when the rings are slid in the opposite direction.

The operation of the described embodiments are easily understood from the description of their structure.

The poles are first fixed on the ground and then the bearer guides are rotated in their extended position. The cover-shade is then extracted and guided along the guides up to the end position thereof. A stop catch may be provided at said free ends of the guide, to retain the awning cloth in its open position.

The embodiment shown in FIG. 7, may be rotated at 23 about a horizontal axis, so that the shade may be tilted up to the point in which the front end of the shade reaches the ground and in this way a wind-screen structure is obtained.

I claim:

1. Collapsible beach-umbrella with a bearer structure for an awninglike shade and at least one pole adapted to be fixed on the ground for supporting said bearer structure, characterized in that said bearer structure includes at least one roller-shade unit supported on said pole, at least one elongated bearer guide for guiding and retaining said shade in stretched condition, at least one of said bearer guides having one end thereof hingedly connected with said roller-shade unit and having stop means retaining said bearer guide in a cantileverwise extended position with respect to said pole.

2. Beach-umbrella according to claim 1, characterized in that said roller-shade is an automatically winding-up roller-shade.

3. Beach-umbrella according to claim 1, characterized in that said roller-shade unit has an elongated casing housing said roller-shade in wound-up condition thereof and the beach-umbrella has at least two poles supporting said casing at both ends thereof and at least two bearer guides articulated cantileverwise on said roller-shade unit.

4. Beach-umbrella according to claim 1, characterized in that said roller-shade unit and said pole have common hinge means providing mutual connection therebetween.

5. Beach-umbrella according to claim 4, characterized in that said common hinge means between said pole and said roller-shade unit are arranged in an intermediate position of said roller-shade unit.

6. Beach-umbrella according to claim 5, characterized in that said pole is a composite pole having at least two pole sections pivotably connected to each other.

7. Beach-umbrella according to claim 1, characterized in that said elongated bearer guide comprises telescoping elements.

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