

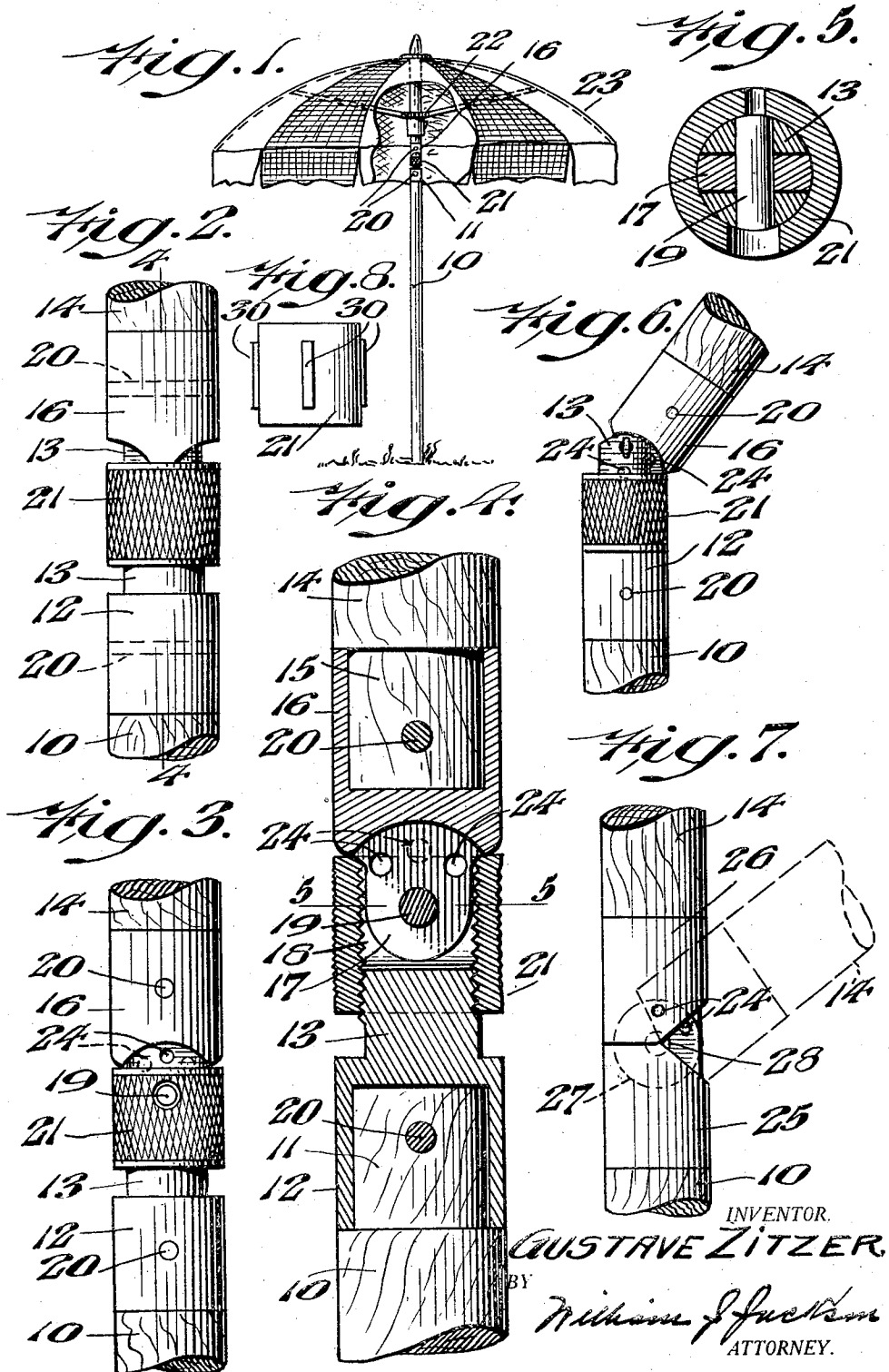
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TILTING DEVICE FOR UMBRELLAS

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TILTING DEVICE FOR UMBRELLAS

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This invention, stated in its broadest terms, relates to a coupling device, and has more particular relation to a tilting device for so-called beach or lawn umbrellas.

The chief problem concerning a device of the character under consideration is to tilt the umbrella so as to react to the rays of the sun. Because of the fact that the main support for the umbrella is more or less rigidly supported, it is necessary that the umbrella proper be tilted to react to the rays of the sun. It is essential in the shifting of the umbrella proper that the operator be placed to the least possible exertion in making the adjustment.

One object of the present invention is to provide a construction of the character stated in which there is provided a coupling consisting of a socket the outer end of which is provided with an extension, a second socket having an extension exteriorly screw-threaded tiltably connected to the first mentioned socket, whereby a lock-nut in one position causes an interlocking of said sockets in vertical position, and whereby in another position said lock-nut permits tilting of the respective sockets with respect to one another.

Other and further objects of the present invention reside in the provision of general details of construction, and arrangement, connection, and combination of parts for attaining the results sought by the foregoing object.

The invention consists of the novel construction hereinafter described and finally claimed.

The nature, characteristic features and scope of the invention will be more fully understood from the following description taken in connection with the accompanying drawing forming part hereof, and in which:

Fig. 1 is a view in elevation, with parts broken away for illustration, of an umbrella embodying the features of the invention;

Fig. 2 is a fragmentary view in elevation showing certain of the parts illustrated in Fig. 1;

Fig. 3 is an elevational view of Fig. 2;

Fig. 4 is a vertical sectional view taken upon the line 4—4 of Fig. 2;

Fig. 5 is a view in cross-section taken upon the line 5—5 of Fig. 4;

Fig. 6 is a view in elevation illustrating a tilted form of construction;

Fig. 7 illustrates in elevation the device shown in Fig. 6, the dashed lines illustrating the umbrella parts in tilted position; and

Fig. 8 is a view in elevation of a slightly different form of lock-nut.

For the purpose of illustrating my invention I have shown in the accompanying drawing forms thereof which are at present preferred by me, since the same have been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring now to the drawing, and more particularly to Figs. 1 to 5 inclusive, the reference numeral 10 designates a fixed pole which may be of wood or metal as fashion dictates. The pole 10 as shown in the drawing, being of wood, is provided at its inner end with a reduced portion 11. The reference numeral 12 designates a metallic socket having an exteriorly screw-threaded extension 13. The diameter of the socket 12 is of the same diameter as the diameter of the pole 10 for a purpose to presently appear. The reference numeral 14 designates a pole which may be of wood or metal and which has tiltable relation with the fixed pole 10. The pole 14 is provided with a reduced extension designated 15 arranged to co-operatively engage with the socket 16 of a metal casting. This socket 16 has formed integral therewith a lug 17, which lug and socket are arranged to have tiltable relation with respect to the exteriorly screw-threaded extension 18 of socket 12. In the connection it is to be noted that the extension 18 is bifurcated in order to accommodate the lug 17 of socket 16. The lug 17 of socket 16 has pivotal relation in the bifurcated portion of extension 18 and the pivotal parts are co-operatively secured together by means of a pin 19. Use is made

of pins 20 for co-operatively securing the above mentioned parts together. In the connection it is to be noted that the pole 10, the socket 12, and the lock nut designated by the reference numeral 21 are all of equal diameter so that when in tilting the umbrella to a position which the operator desires to acquire, release of the finger piece 22 in order to close the umbrella results in the permission of the finger piece 22 to pass exteriorly with respect to the sockets and lock nut aforesaid, thereby permitting the umbrella to be collapsed and resume its original position. The lock nut 21 is interiorly screw-threaded to co-operatively engage with the exteriorly screw-threaded portion of the bifurcated member forming part of the socket 12. Thus, a person sitting beneath an umbrella upon the beach or a lawn may readily adjust the umbrella 23 either vertically or at an inclination with respect to the fixed pole 10 by merely rotating the lock nut with respect to the two sockets. Thus, if it be desired to tilt the umbrella 23 either to the left or to the right with respect to the pole 10, the same may be readily accomplished by adjusting the lock nut with respect to the two sockets so that the umbrella and its complemental parts may be tilted around the pivot point 19. However, should the person using the umbrella desire to attain a position of the umbrella horizontally of the pole 10, it is merely necessary to revolve the lock nut 21 with respect to the sockets before described and screw the lock nut firmly with respect to the socket 16 and pole 14, thus maintaining the umbrella 23 in the position shown in Fig. 1. As shown in the drawing, the sockets 12 and 16 are formed from castings and the threaded extension 13 is formed integral with socket 12 and the lug 17 is formed integral with socket 16.

In order to assemble the sockets with respect to the lock nut, the pivot pin 19 is driven through an aperture in the lock nut and through the extensions of the said sockets so that the ends of the pivot pin are flush with the exterior of said extensions so as to permit the lock nut to be revolved with respect to the two sockets.

In the event that the umbrella 23 should be desired to be locked in tilted or fixed position without the use of the lock nut 21, use is made of apertures 24 of which there are three shown in the drawing, whereby when a cotter-pin (not shown in the drawing) is inserted with respect to said openings fixed positions of the umbrella is obtained.

Referring now to Fig. 7, a slightly modified form is disclosed. The staff 10 is provided with sleeves 25 and 26, each of which is provided with a lug 27 arranged hinge-fashioned and connected by a pin 28 so that the umbrella rod 14 may be tilted with respect to the main rod 10, as indicated by

dashed lines in Fig. 7 of the drawing. In order to secure the umbrella in fixed position, the lugs 27 are provided with apertures 24 as in the foregoing figures so that a pin (not shown) may be inserted to so fasten the parts one with respect to another.

In Fig. 8, instead of having the lock-nut knurled the periphery of the same is provided with vertically arranged lugs 30 so that the operator may readily rotate the lock-nut. This is a simpler and less expensive manner than knurling.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

What is claimed is:

1. In a beach or lawn umbrella a coupling comprising a lower socket the top of which is provided with an annular shoulder terminating in an exteriorly screw-threaded upright bifurcated extension, an upper socket having a pendant integral lug pivoted to said bifurcated extension so as to have tiltable connection with said first mentioned socket, the lower part of said upper socket having an annular shoulder, and an internally screw-threaded lock-nut arranged to co-operatively engage said extensions to vertically align said sockets in vertical position or permit inclination of one socket with respect to the other as limited by the shoulder upon said upper socket, said lock-nut being limited as to downward movement by the shoulder of said lower socket.

2. In a beach or lawn umbrella a coupling comprising a lower socket the top of which is provided with an annular shoulder terminating in an exteriorly screw-threaded upright bifurcated extension, an upper socket having a pendant integral lug pivoted to said bifurcated extension so as to have tiltable connection with said first mentioned socket, the lower part of said upper socket having an annular shoulder, an internally screw-threaded lock-nut arranged to co-operatively engage said extensions to vertically align said sockets in vertical position or permit inclination of one socket with respect to the other as limited by the shoulder upon said upper socket, said lock-nut being limited as to downward movement by the shoulder of said lower socket, and means independent of said lock-nut for securing said sockets in aligned position as well as in tilted positions.

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