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UMBRELLA TENT

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FIG-1-

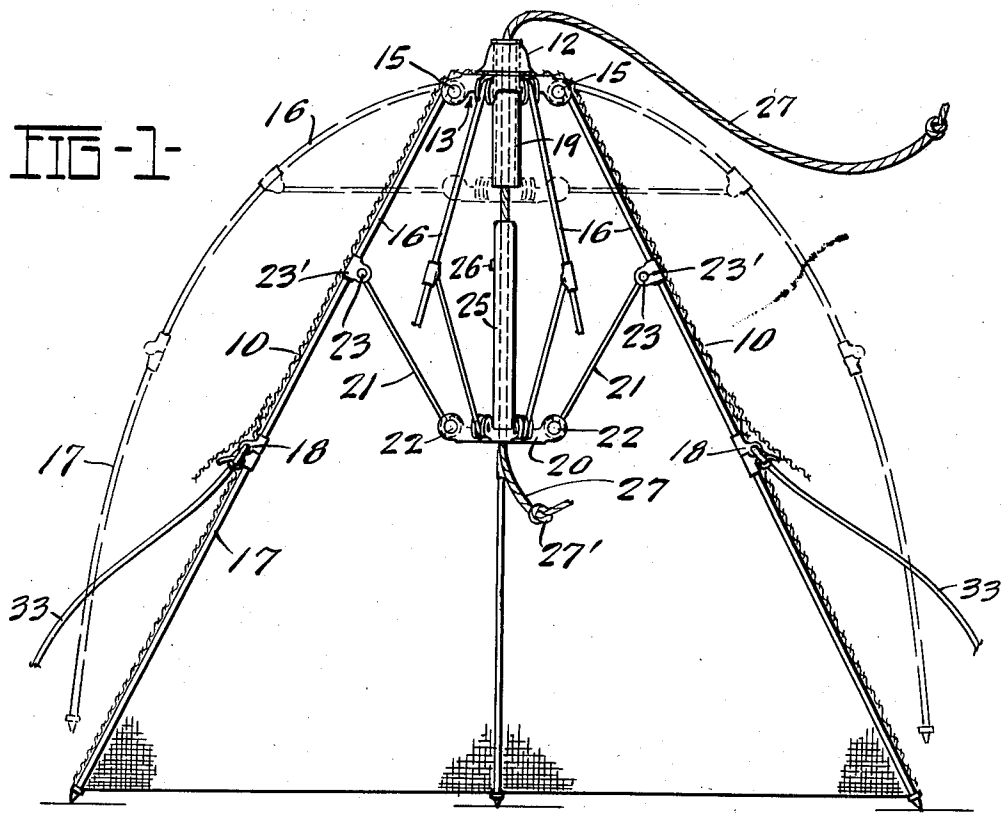


FIG-2-

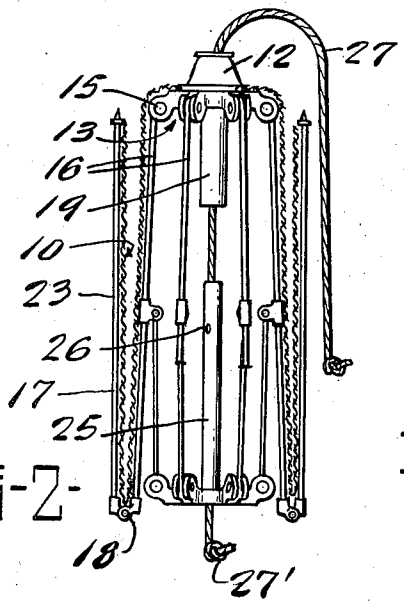
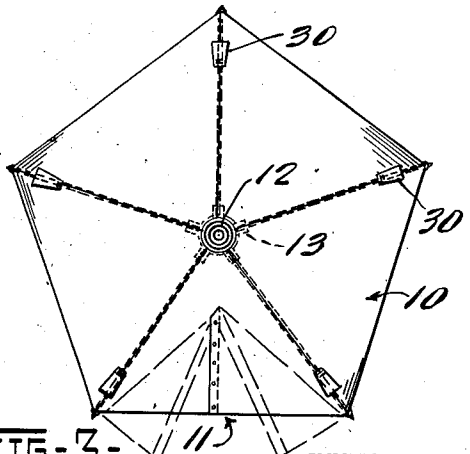


FIG-3-



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UMBRELLA TENT

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FIG-7-

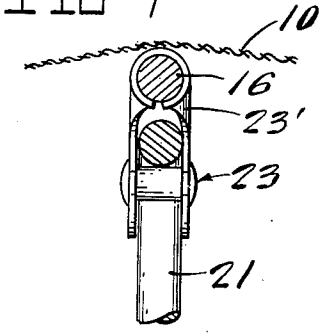


FIG-5-

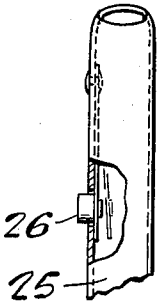


FIG-4-

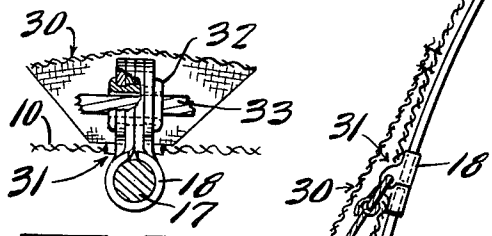
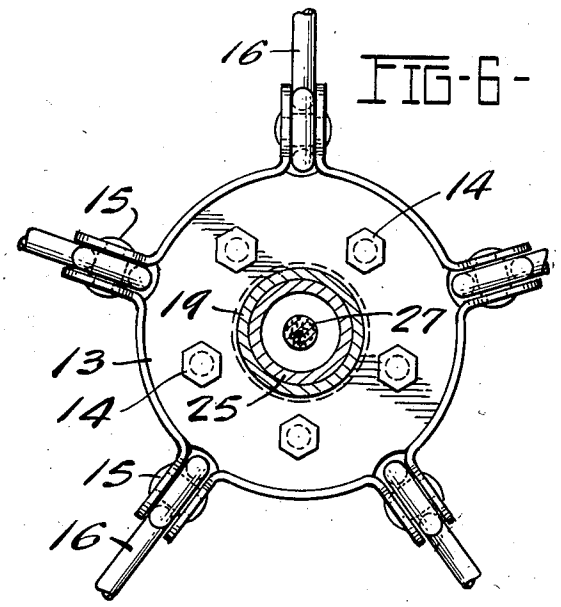


FIG-8-

FIG-6-



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UMBRELLA TENT

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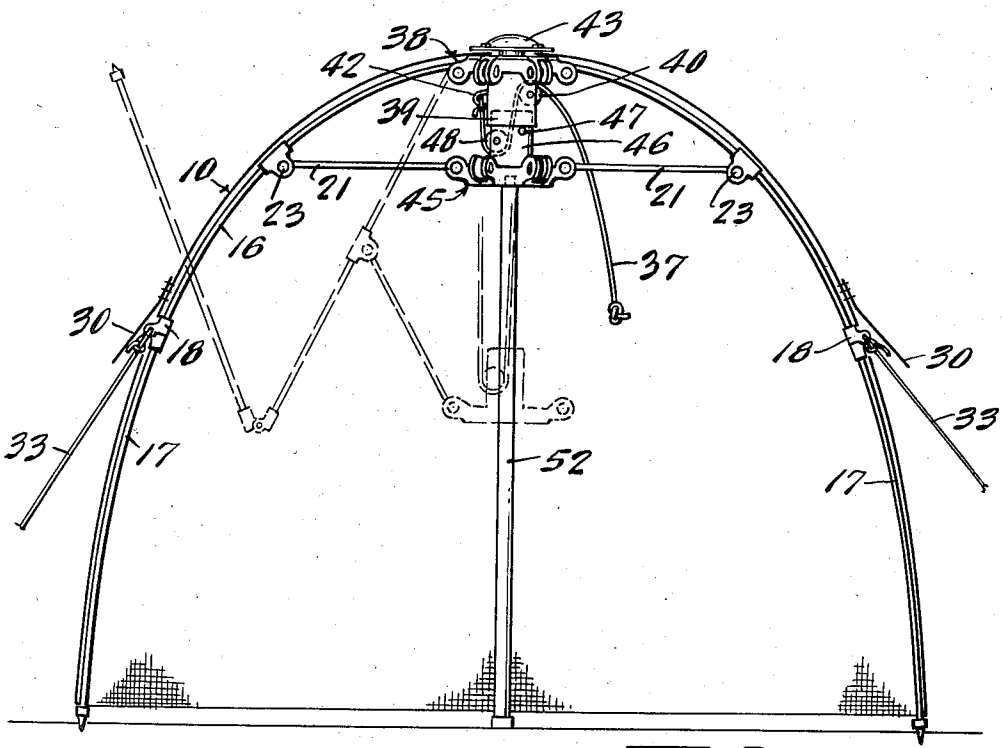


FIG-9-

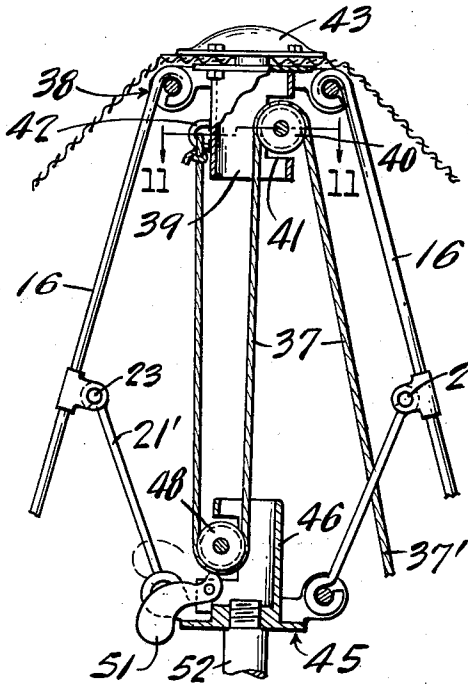


FIG-10-

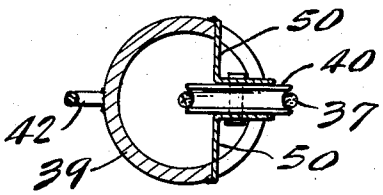


FIG-11-

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United States Patent Office 2,864,389 Patented Dec. 16, 1958

2,864,389

UMBRELLA TENT

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Application April 9, 1956, Serial No. 577,090

1 Claim. (Cl. 135—2)

This invention relates to umbrella tents in which ordinarily a center pole may be dispensed with, the ribbed frame of the tent constituting the main support. However, in some instances, a center pole may be desirable, and may be used to provide additional stability or to provide support for lanterns, clothes hangers, etc.

An object of this invention is to produce a new and improved umbrella tent which can be readily and conveniently erected to position of use or collapsed into a small package for storage or transportation, it being merely necessary to pull on a rope to erect or position the tent for use, the rope being connected to a toggle mechanism for stretching the tent into the desired position, then when it is desired to collapse the tent the toggle mechanism is pushed in the opposite direction to effect collapse of the tent, and allow compacting of the parts of the tent into a relatively small package.

Other objects consist in details of construction, arrangement and assembly and for purposes of illustration, but not of limitation, an embodiment of the invention is shown in the accompanying drawings in which

Figure 1 is a sectional vertical elevation of the tent in partially erected position, some of the parts being shown in broken lines to indicate the fully erected position;

Figure 2 is a diagrammatic view of the tent in its nearly finally collapsed form;

Figure 3 is a top plan view of the tent showing the position of the ribbed framing and covering when the tent is fully opened;

Figure 4 is an enlarged sectional view of one of the ribs and associated or connecting parts;

Figure 5 is a detailed perspective view of a portion of a locking means or detent for maintaining the open position of the tent;

Figures 6, 7 and 8 are detail enlarged sectional views of certain parts of the construction taken respectively on lines 6—6, 7—7, 8—8, on Figure 4;

Figure 9 is a diagrammatic view of an alternate form of the invention in which a different type of toggle elevating means is indicated, together with a center support post;

Figure 10 is an enlarged detailed view of the toggle operating mechanism shown in Figure 9; and

Figure 11 is a sectional detail view taken on line 10—10 of Figure 9.

The illustrated embodiment of the invention comprises an umbrella tent having a canvas covering 10 (Figure 1) and an access opening 11 (Figure 3) of the usual type. Connected to the peak of the tent is a dome-shaped fitting 12 disposed on the outer side of the tent, a spider 13 being arranged on the inside of the tent and these two parts being rigidly secured together by a series of rivets or bolts 14 (Figure 4), the canvas 10 being held captive therebetween. Connected to the spider 13 by a plurality of hinges 15 are radially disposed rods 16 which bow gently outwardly and downwardly. The hinges 15

are of the type that enable the rods to swing upwardly and downwardly in a generally vertical plane.

Connected to the lower ends of the rods 16 are rods 17 which are connected together by hinges 18 of the 180 degree type, enabling the rods 17 to swing upwardly with respect to rods 16, but preventing them from swinging inwardly. In this connection (note Figure 1), the broken lines indicate the manner in which the rods 16 and 17 can flex when it is desired to erect the tent to its fully opened position. The canvas is fitted to assume smoothly this fully opened position without undue strain. The rods 16 and 17 in their unstressed state being comparatively straight (see Figure 1).

A tube 19 is adapted to extend through and depend from the underside of the spider 13 and is welded as at 12' to the dome 12. A series of radially disposed rods 21 are connected by hinges 22 to another spider 20. The outer ends of the rods 21 are pivotally connected at 23 to the rods 16 by means of clips 23', as indicated on Figure 7. The spider 20 has an upwardly extending tube 25 adapted to telescope into the tube 19 of the spider 13 (Figure 4), and is welded as at 20' to the spider 20. Near the upper end of the tube 25 is a spring actuated stop button or detent 26 adapted to lock the parts in spread open position as in Figures 4 and 5. A rope 27 has a knot 27' on its lower end to bear against the underside of the spider 20, and the upper end portion of the rope extends outside of the tent.

The canvas 10 forming the body of the tent has a plurality of flaps 30 stitched at intervals about the perimeter of the tent at a level to conceal openings 31 through which the hinge parts 18 may extend. The hinges 18 are fitted with tubular rivets 32, of sufficient size to permit insertion of usual tent stays or ropes 33 for maintaining stability of the assembly. The ropes 33 may be tied to stakes 34 or other objects fixed to a suitable base.

Another form of our invention is illustrated in Figures 9, 10 and 11, and embodies a construction wherein a rope 37 may always be kept within the tent. With particular notice to Figure 10, an upper spider 38 has fitted to its underside a tubular member 39, for purposes hereinafter described. The tubular member 39 has a pulley 40 secured into an opening 41 in its side wall, to permit passage of the rope 37 therethrough. The stationary end of the rope may be tied to a loop 42 on the outer side of the tube 39 opposite the opening 41. A domed cap 43 may be positioned over the spider 38 to hold the canvas 10 captive therebetween.

A lower spider 45 has a tubular portion 46 welded or otherwise secured to its upper surface and adapted to fit telescopically within the tube 39 for a short distance. The distance is governed by provision of stop buttons 47 attached at predetermined points on the tube 46. A pulley 48 is mounted in an opening in the side wall of the tubular member 46, and so positioned that the rope 37 may be passed therethrough. The pulleys 40 and 48 may be secured to the tubular members by means of clips 50, welded or otherwise attached thereto. A rope clamping lever 51 may be used to arrest the travel of the rope 37 over the pulley 48 as desired.

With the construction shown in Figure 10, the lower end 37' of the rope 37 may be drawn outward to raise the spider 45 thus extending the rods 21' to the position of Figure 9 to effect erection of the tent. A center pole 52 must be attached to the spider 45 to erect the tent and serves as a rest to support the weight at standing level until the lifting rope takes over the stress by applying pressure against the brace rods. After the tent is erected, the pole is no longer needed.

In order to collapse the tent of Figure 1, the stop or detent 26 is depressed to permit release of the tube 25

from the tube **19**, the ribs **16** and **17** taking a more or less parallel hanging position. The ribs **17**, and canvas **10** are then folded upwardly as in Figure 2, to make a compact bundle.

The tent of Figure 9 is folded in a similar way except that a brake arm **51** is first manually released to permit free passage of the rope **37** through the pulleys and subsequent lowering of the spider **45** away from the spider **38** to effect collapse of the tent.

It will be understood that changes in details of construction, arrangement and choice of materials may be effected without departing from the spirit of the invention, especially as defined in the appended claim.

What we claim is:

An umbrella tent comprising a dome-shaped body of canvas material provided with a central aperture at the top thereof, a centrally apertured annular plate secured to said body around said aperture on the upper side of said body, a vertical tube rigidly affixed within said plate, said tube having opposite end portions respectively disposed above and below the central portion of said body, a first centrally apertured spider surrounding said tube, said first spider being disposed on the underside of said body with the material of said body surrounding said central aperture engaged between the first spider and plate, means holding said first spider and plate together and clamping said material therebetween, a sleeve vertically slidable in said tube betwen upper and lower position, a second centrally apertured spider affixed around the lower end of said sleeve, a plurality of flexible radial arms having upper ends pivoted to said first spider and lower ends with ground-engaging means thereon, each of said arms

comprising normally continuous upper and lower portions, fittings on the adjacent ends of said arm portions, pivot means on the outer sides of said fittings hingedly connecting said fittings, said fittings and pivot means providing for relative outward pivoting of said arm portions and engaging one another so as to prevent relative inward pivoting of said arms substantially beyond 180 degrees, radial links having inner and outer ends, the inner ends being pivoted to said second spider, pivot fittings rigidly affixed to the upper portions of said arms intermediate the ends thereof, and pivots connecting the outer ends of said radial links to said pivot fittings, whereby when said sleeve is slid to said upper position, said radial links bow said radial arms outwardly along substantially their entire lengths from said first spider to said ground-engaging means.

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