May 3, 1960 G. S. BAKER 2,935,074

TENT FRAME

Filed Jan. 29, 1958 2 Sheets-Sheet 1

Fig. 1

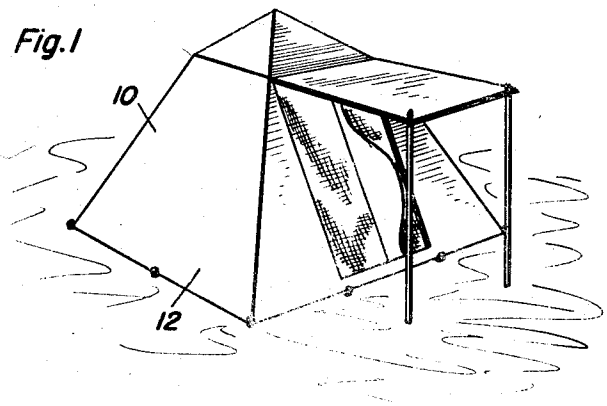


Fig. 3

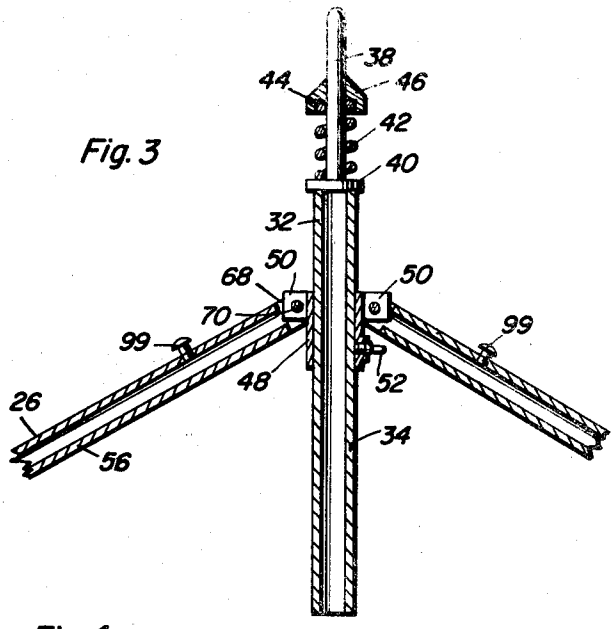


Fig. 4

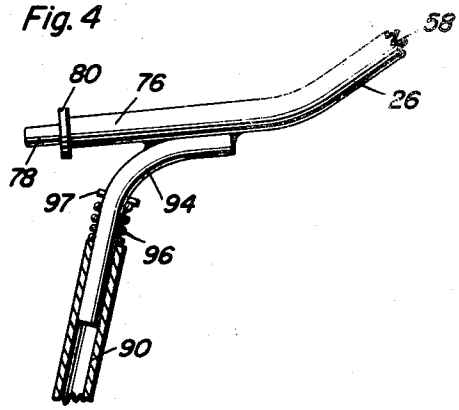
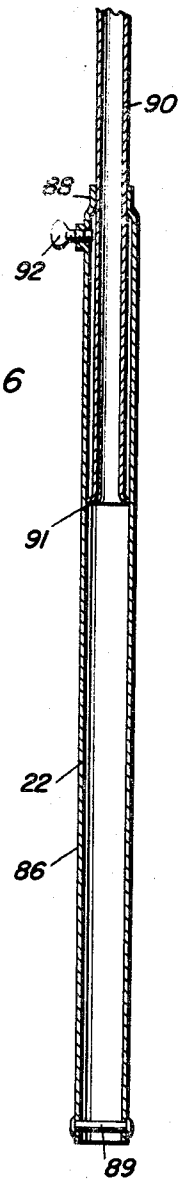


Fig. 6



Gene S. Baker
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

May 3, 1960 G. S. BAKER 2,935,074

TENT FRAME

Filed Jan. 29, 1958 2 Sheets-Sheet 2

Fig. 2

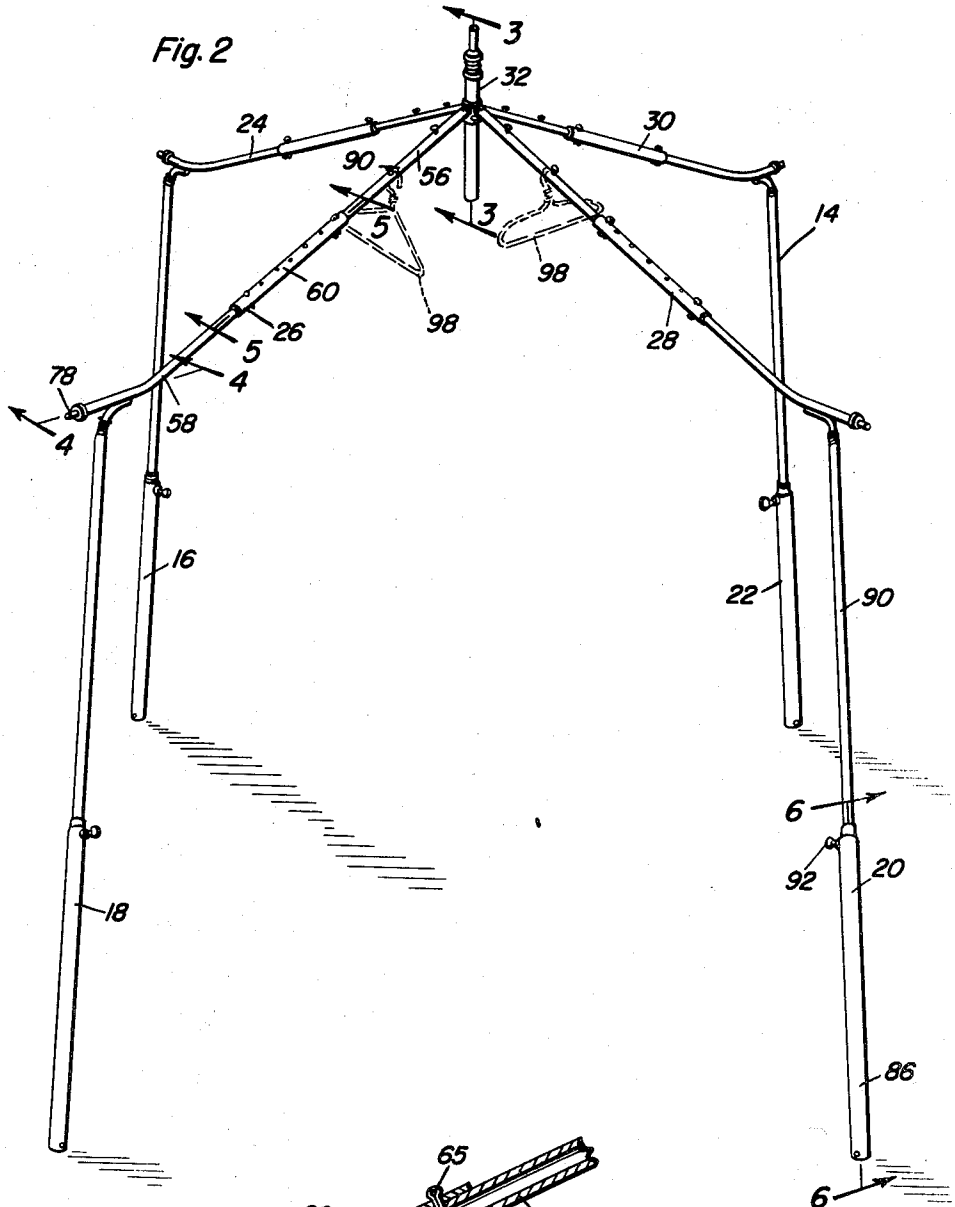
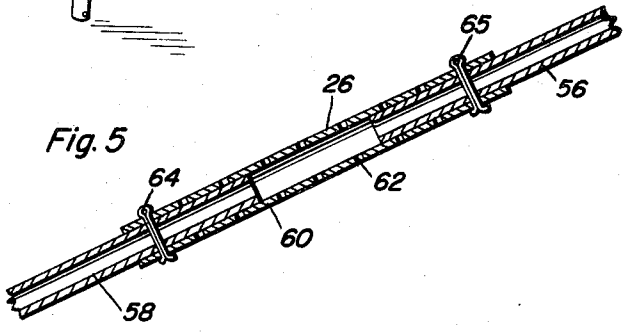


Fig. 5



Gene S. Baker
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office 2,935,074 Patented May 3, 1960

2,935,074

TENT FRAME

Gene S. Baker, Phoenix, Ariz.

Application January 29, 1958, Serial No. 712,024

2 Claims. (Cl. 135—3)

This invention relates to tents and more particularly to a tent frame.

An object of the present invention is to provide a tent with a novel frame enabling the tent to be more easily erected and after erection retain its shape. Tent frames that are of rigid, non-yielding construction require that the tent covering be of a precise size and shape during the entire life of the tent in order to have a neatly appearing and actually, a durable tent. This invention copes with the false assumption that there will never be any shrinkage in the tent covering, by providing yielding joints in the tent frame to compensate for such shrinkage, wear, etc.

Moreover, during the entire life of the tent covering the frame is more easily applied under any conditions.

One of the most important features and objects of this invention is that the frame is adjustable to fit all makes of umbrella tents including those with a side room. Different sizes of tents and different manufacture's makes can be accommodated by the frame of this invention. Not only are the legs of the tent frame adjustable, as are the spreader arms, but there are also individual means in the joints of the legs, spreader arms and the short center pole, which allow for variations in dimensions and yet provide a neat appearing tent.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a tent using the frame of this invention;

Figure 2 is a perspective view of the frame;

Figure 3 is an enlarged sectional view taken on the line 3—3 of Figure 2 and showing principally the center pole and the means for attaching the spreader arms to the center pole;

Figure 4 is an enlarged fragmentary sectional view taken on the line 4—4 of Figure 2 and showing the articulated joint connecting the end of one spreader arm to one leg of the frame;

Figure 5 is a sectional view taken on the line 5—5 of Figure 2 and showing the means by which the spreader arms are extensively connected together; and

Figure 6 is an enlarged sectional view taken on a line 6—6 of Figure 2 and showing the adjustable leg which typifies the other legs as well as the single leg shown in Figure 6.

In the accompanying drawings there is shown a tent 10 which may be of any manufacturer's make and as is shown, the tent is preferably an umbrella tent. Covering 12 of the tent is attached to tent frame 14 (Figure 2) to achieve the enclosure. Tent frame 14 has four legs 16, 18, 20 and 22 respectively, together with four spreader arms 24, 26, 28 and 30 attached to the upper ends of the four legs. Center pole 32 is connected to the spreader arms at their intersection with the upper end of the

center pole rising above the spreader arms 24, 26, 28 and 30. Center pole 32 is made of a bar or a sleeve 34 that has a coaxial extension in its upper end and formed of a short rod 38 that has a seat 40 at its lower end. The seat is welded to the upper end of sleeve 34. Coil spring 42 is concentrically disposed on the bar 38 and has its lower end seated on seat 40 and its upper end disposed in a recess 44 in the sliding seat 46. This seat is made of a collar that is slidably disposed on the rod 38.

Collar 48 is slidably disposed on the sleeve 34 of center pole 32 and has four ears 50 protruding laterally therefrom. Setscrew 52 or a corresponding fastener, is carried by the collar 48 and engages the surface of or an opening in center pole 32 to hold the collar in selected adjusted position longitudinally of sleeve 34 of the center pole 32.

The spreader arms 24, 26, 28 and 30 are each made so that they are capable of being extended and retracted to alter their effective length. Spreader arm 26 is typical (Figure 5) and is made of two pieces of tubing 56 and 58. These pieces of tubing are spreader arm members which are connected together by a sleeve 60. The sleeve acts as an adjustable coupling since it is provided with a group of apertures 62 through which pins 64 and 65 are passed. These pins are passed through apertures in the spreader arm members to achieve the adjustment that is required.

Pairs of ears, as ears 68 on spreader arm 26, are formed at the inner end of each spreader arm and they accommodate a pin 70 in apertures thereof. The pins 70 also pass through apertures in ears 50 thereby pivotally connecting the spreader arms to collar 48. The outer ends of the spreader arms have curved extremities 76 with short pins 78 protruding from seats 80 on the outer extremities 76. These are adapted to engage the corners of tent covering 12 while the apex of the tent covering is seated on rod 38.

The four legs 16, 18, 20 and 22 are identical. Leg 22 has a lower section 86 made of a sleeve with a neck 88 at its upper end. A transverse stop 89, such as a pin, is at the lower end of the lower section of leg 22. The upper section 90 of the leg 22 is also made of a sleeve that has a flange 91 at its lower end and held captive for sliding movement in lower section 86 of the leg. A setscrew 92 or corresponding fastener is carried by the lower section of the leg and engages the upper section 90 to hold the legs in selected position of extension with respect to each other.

The means connecting the upper ends of the legs to the spreader arms are articulated joints, as are the connections between collar 48 and spreader arms. The leg and spreader arm connecting means are shown in Figure 4 and comprise a curved rod 94 whose upper end is welded to the extremity 76 and whose lower end is fitted in the bore of the upper section or sleeve 90 of one of the legs. Coil spring 96 is concentrically arranged on the curved rod 94 and seated against a stop which may be a pin 97 carried by curved arm 84. The opposite end of the coil spring seats on the upper end of the upper section 90 of the leg. This forms a joint which can be compressed and slightly articulated to account for variations in tent coverings not only between manufacturer's makes, sizes, etc. but also to account for certain small irregularities and shrinkage.

In use, the frame is adjusted for the size of tent that is to be formed. Thereafter covering 12 is applied on it. Should a side be desired, an additional frame will be used, but this will not vary from present practice.

Coat hangers 98 are illustrated in Figure 2. They are suspended from the spreader arms and anchored by small pins 99 that are carried by the inner sections of the spreader arms. Since these inner sections are at the

highest points in the tent, the garment hangers 98 are retained in this area.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In a tent having a flexible covering, a frame comprising tubular corner legs, top spreader arms, a center pole including a spring biased seat for engaging the top of said covering and urging the same upwardly, means connecting inner ends of said spreader arms to said center pole, outer end portions of said spreader arms overlying upper ends of said legs and projecting laterally outwardly beyond the same, enlarged seats and reduced pins provided at the outer ends of the spreader arms for engaging upper corners of said covering and spacing the same from the upper end portions of said legs, and spring biased means connecting the upper ends of the legs to the overlying portions of said spreader arms whereby sides of the covering may be held taut when the lower edge of the covering is anchored, said last mentioned means comprising downwardly curved rods secured to and depending from said overlying portions of the spreader arms in inwardly spaced relation from said enlarged seats, said rods including straight lower portions slidably telescoped in the upper end portions of said legs, cross pins provided in said rods at points spaced above the upper ends of the legs, and compression springs positioned on said rods between the upper ends of the legs and said cross pins.

2. The device as defined in claim 1 wherein each of said spreader arms and legs includes a pair of slidably telescoped tubular sections and means for releasably locking said sections in a pre-adjusted relation.

References Cited in the file of this patent

UNITED STATES PATENTS

246,118	Garver	Aug. 23, 1881
1,100,310	Lazaraus et al.	June 16, 1914
1,129,194	Hanley	Feb. 23, 1915
1,528,109	Hawkins	Mar. 3, 1925
1,853,367	Mace	Apr. 12, 1932
2,811,164	Ames	Oct. 29, 1957