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INFLATABLE PLASTIC TENT

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FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

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This invention relates to inflatable tents made of plastic sheet material, which when inflated are self-supporting, and when deflated are light and compact.

One manner of constructing the side walls 12 and the ridgepole area 14 of the tent is to superimpose a pair of unreinforced plastic sheets of tough thin material. It has been found that when the plastic sheets are reinforced with fabric that they become much heavier and more expensive and many of the objects of the present invention are lost. The superimposed sheets of plastic have a width equal to the length of the tent and have a length which extends from the ground line 16 at one corner of the tent up over the ridgepole area 14 and down to the other ground line 16 at the other corner of the tent. The superimposed plastic sheets, given the numerals 18 and 20 in FIGURE 4 are secured together in fluid tight relation in the ridgepole area 14 of the tent, and this is conveniently done by a pair of parallel spaced apart heat seals 22 which extend the full length of the ridgepole area 14 completely from the front to the back of the tent. A flat hinge like portion is thus provided in the ridgepole of the tent about which the sides 12 of the tent can bend.

Now a plurality of vertically extending heat sealed lines 24 are made in the sides 12 of the superimposed sheets to join the sheets together in the region of the heat sealed lines to thereby form a plurality of tubes in each side 12 of the tent. The heat sealed lines 24 are terminated short of the ground line 16 and short of the ridgepole area 14 so that each tent side has a manifold 26 at the ground line 16 and a manifold 28 near the ridgepole area 14, so that by providing an inflation valve 30 on each side 12 each side can be inflated to inflate the plurality of tubes forming the side to provide a flat relatively stiff and sturdy structure with inflation pressures which can be achieved by mouth. The structure possesses good supporting strength, but is flexible and resilient as well to stand wind buffeting, rain storms, and the like.

Secured at the ground line, in the manner best seen in FIGURE 3, is a plastic sheet floor 32 for the tent, this being secured in fluid tight relation to the lower edges of the sheets 18 and 20 forming the side wall 12 of the tent. This can be effected by heat sealing all of the edges together at 34, as seen in FIGURE 3. If found convenient in manufacture, one of the sheets 18 or 20 can be extended to a length to form the floor 32. Such an arrangement is clearly shown with reference to FIGURE 6.

In like manner, FIGURE 5 illustrates how the ends of the tent are secured to the sides of the tent. In FIGURE 5 the plastic sheet forming the front wall of the tent 36 is heat sealed at 38 to the sheets 18 and 20 forming the side wall 12 of the tent. The front 36 of the tent is formed, in the usual manner, as a pair of flaps which can be secured in closed relation by snaps 40 when desired. The back wall of the tent is secured not only to the sides of the tent but also to the floor by heat sealing.

It will be evident from the foregoing that a tent constructed in accord with the invention can be made inexpensively of light but strong plastic sheet, with the tent when deflated occupying a minimum of space, but when inflated by mouth providing a sturdy and weatherproof structure which is attractive in appearance. It has been found that once the tent is inflated it can be picked up off the ground, without any effort, simply folded about the ridgepole area 14 to provide a double thickness air tube mattress for use in a stationwagon, for use on a beach, or as desired.

To achieve a maximum of simplicity the tent is normally held in position when inflated by placing camp equipment or stones found on location in the four corners of the tent, but if desired other hold down means can be utilized, such as tabs heat sealed...
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3 to the tent adjacent the ground line through which stakes can be driven into the ground.

While a certain representative embodiment and details have been shown for the purpose of illustrating the invention, it will be apparent to those skilled in this art that various changes and modifications may be made therein without departing from the spirit or scope of the invention.

What is claimed is:

1. The combination in an inflatable tent of a pair of superimposed sheets of unreinforced plastic extending from the ground to the ridgepole area and back to the ground, said sheets being heat sealed together in two parallel lines at the ridgepole area, said sheets being heat sealed together in a series of parallel lines extending vertically of the sides of the tent but terminating short of the ground and the ridgepole area to form a plurality of tubes each terminating in a manifold at the ground and ridgepole area of the tent, valve means for inflating each side of the tent, each inflated side lying flat and joining at the ridgepole area to form an inverted V, a plastic sheet floor in the tent bent back on itself and heat sealed along said bent back portion to a bent back portion along the side manifold near the ground, a plastic sheet back in the tent bent back on itself and heat sealed along said bent back portion to bent back portions along the sides and the floor, and a plastic sheet front on the tent formed as a pair of flaps bent back on themselves and heat sealed along the bent back portion to bent back portions along the sides of the tent.

2. The combination in an inflatable tent of a pair of superimposed sheets of unreinforced plastic extending from the ground to the ridgepole area and back to the ground with at least one of the sheets extending to the original ground starting position, said sheets being heat sealed together to parallel lines at the ridgepole area, said sheets being heat sealed together in a series of parallel lines extending vertically of the sides of the tent but terminating short of the ground in the ridgepole area to form a plurality of tubes each terminating in a manifold at the ground and ridgepole area of the tent, valve means for inflating each side of the tent, each inflated side lying flat and joining at the ridgepole area to form an inverted V, at least one of the pair of superimposed sheets forming a floor in the tent and being bent back on itself toward the inside of the tent and heat sealed along said bent back portion to a portion bent back toward the inside of the tent along one side manifold near the ground, a plastic sheet back in the tent bent back on itself toward the inside of the tent and heat sealed along said bent back portion to portions bent back toward the inside of the tent along the sides and the floor, and a plastic sheet front on the tent formed as a pair of flaps bent back on themselves toward the inside of the tent and heat sealed along the bent back portions to portions bent back toward the inside of the tent along the sides of the tent.

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