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(54) **TARP HOLD DOWN DEVICE**

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(57) **ABSTRACT**

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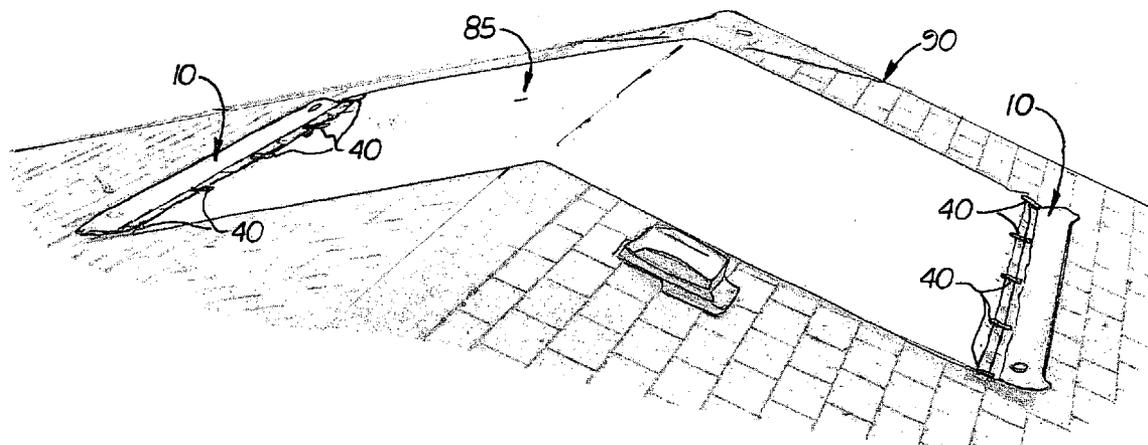
A hold down device used to hold down a tarp placed over an object or placed over a sloped surface. The device comprises a flexible elongated body capable of being rolled into a compact roll during storage and then unrolled for use. The body includes a bladder designed to be filled with fluid material, such as water or sand. Formed on the bladder is at least one port opening and a removable cap that allows the user to selectively fill the bladder with fluid material to provide weight used to hold-down the edge of the tarp. Located along the top edge of the body is a plurality of grommets. Extending through the grommets are adjustable clips that enable the body to be selectively attached to the lower edge of a tarp or stakes that allow the device to hold down a tarp placed over a sloped surface.

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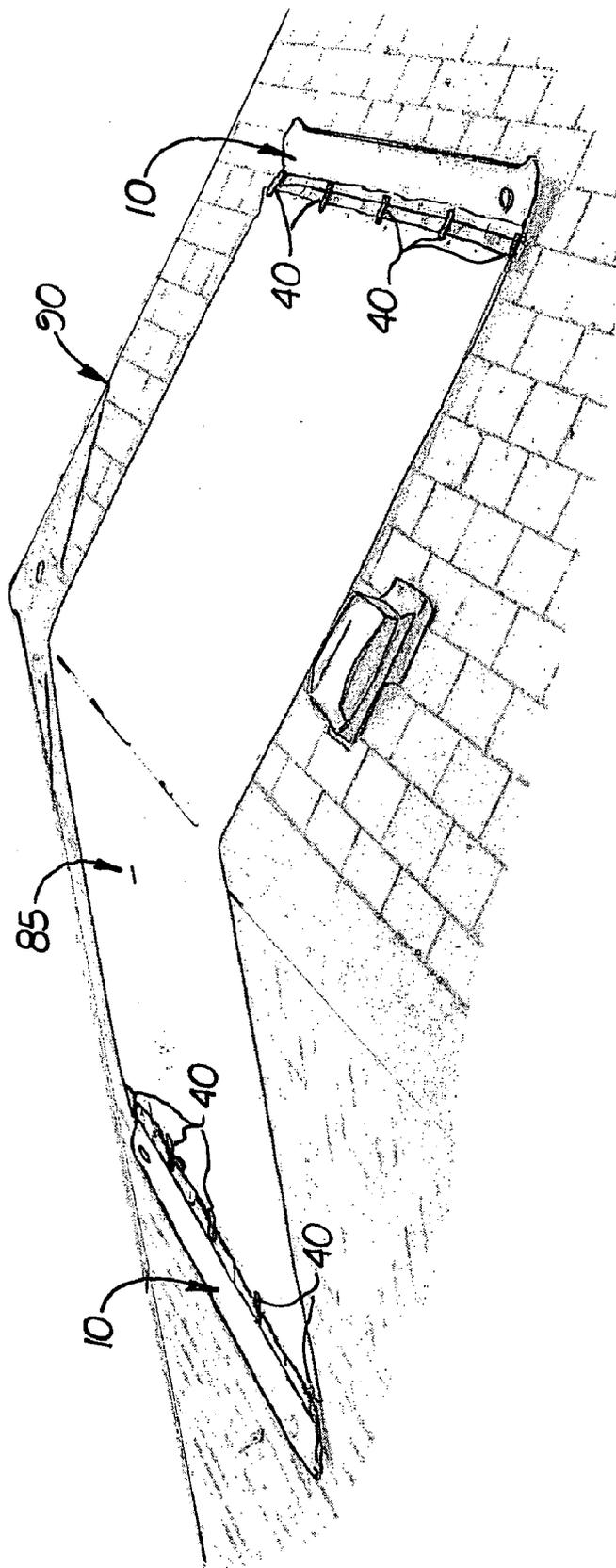


FIG.1

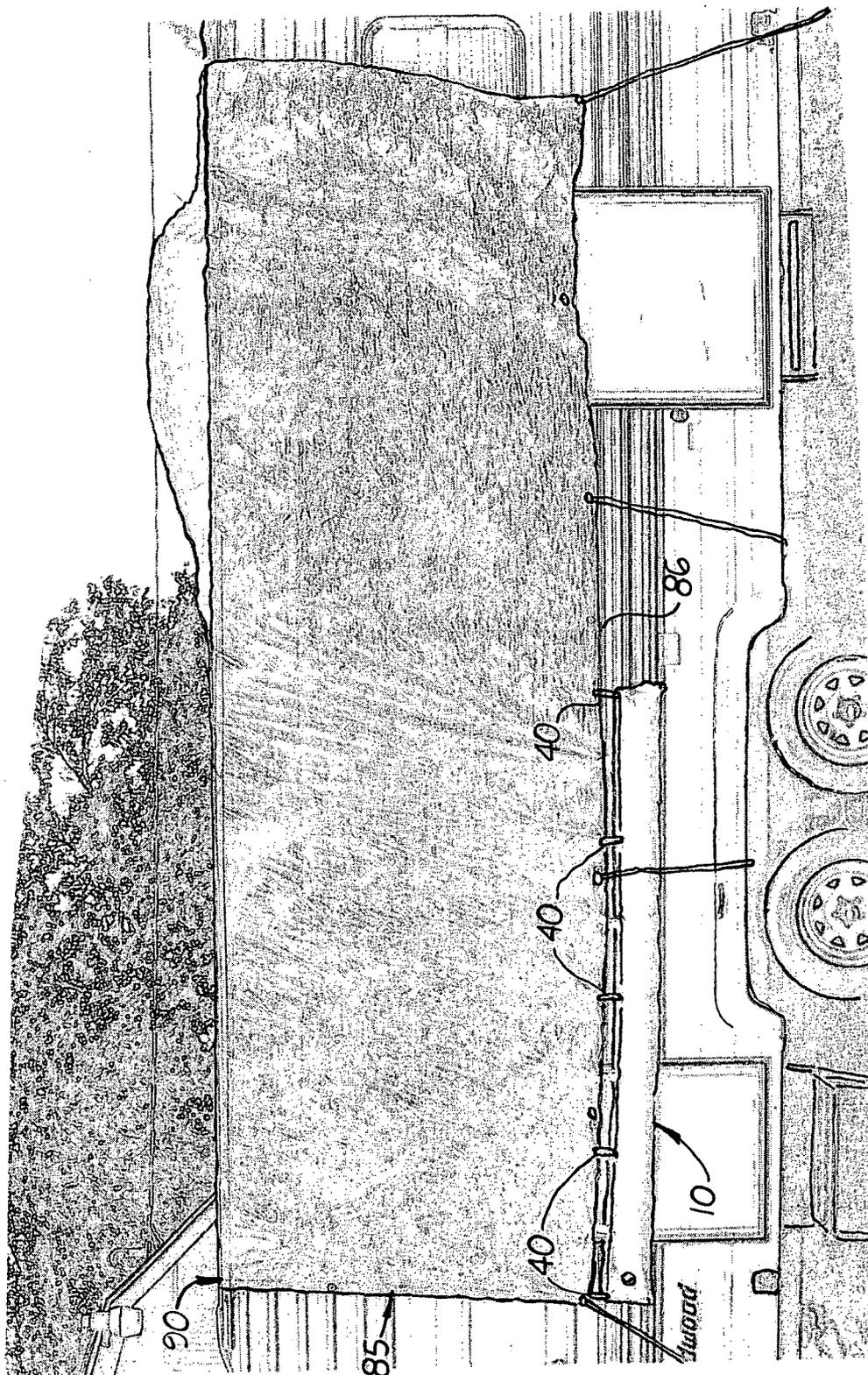


FIG. 2

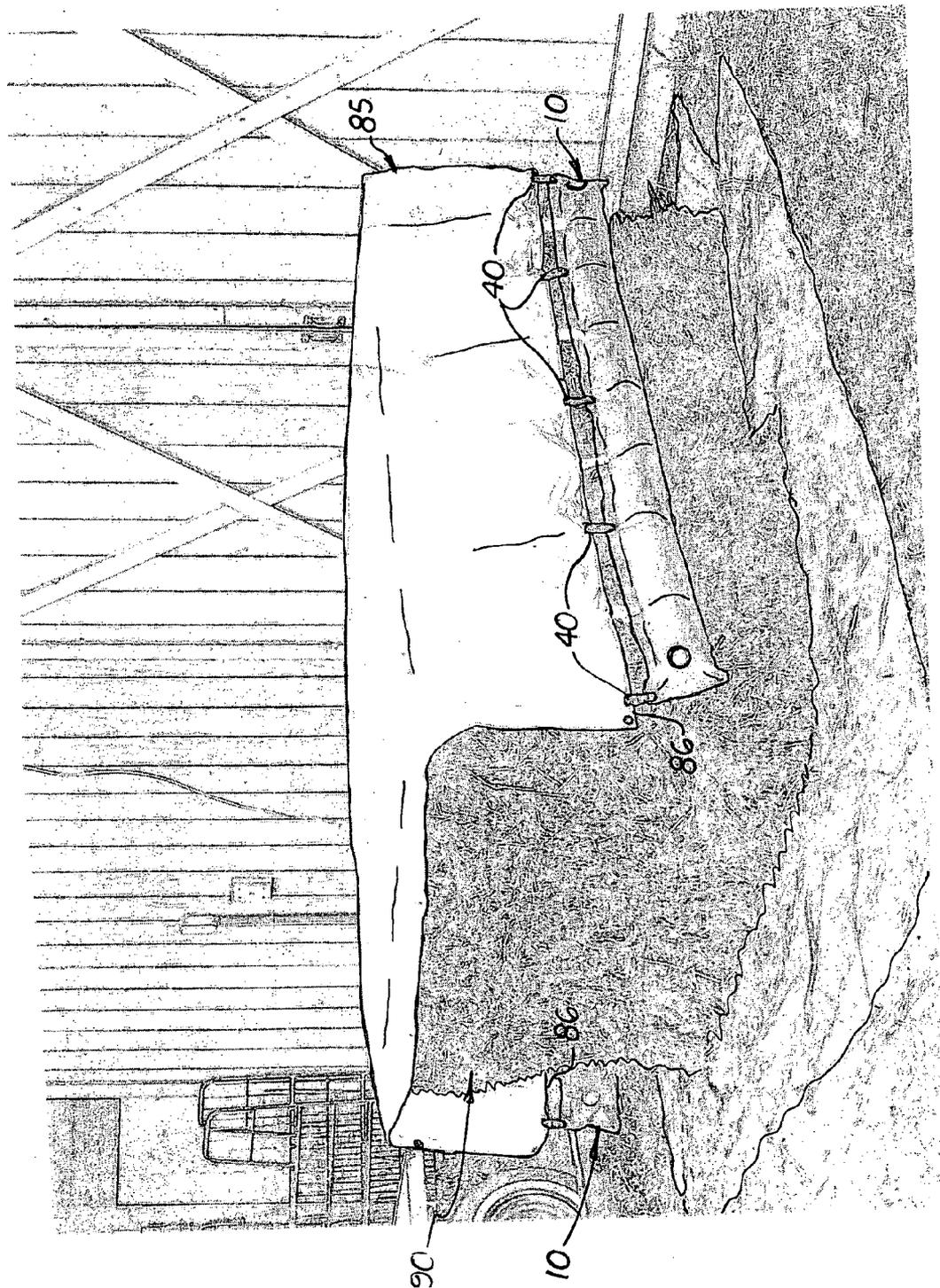
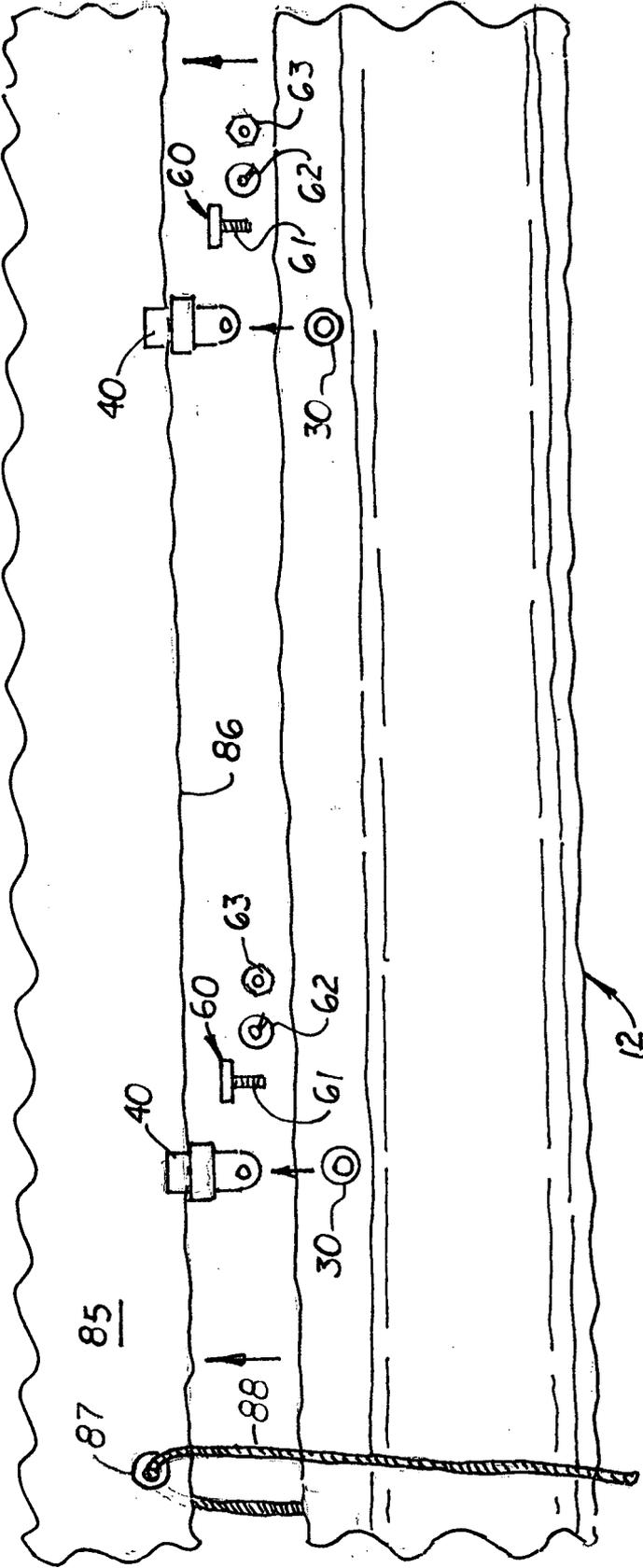
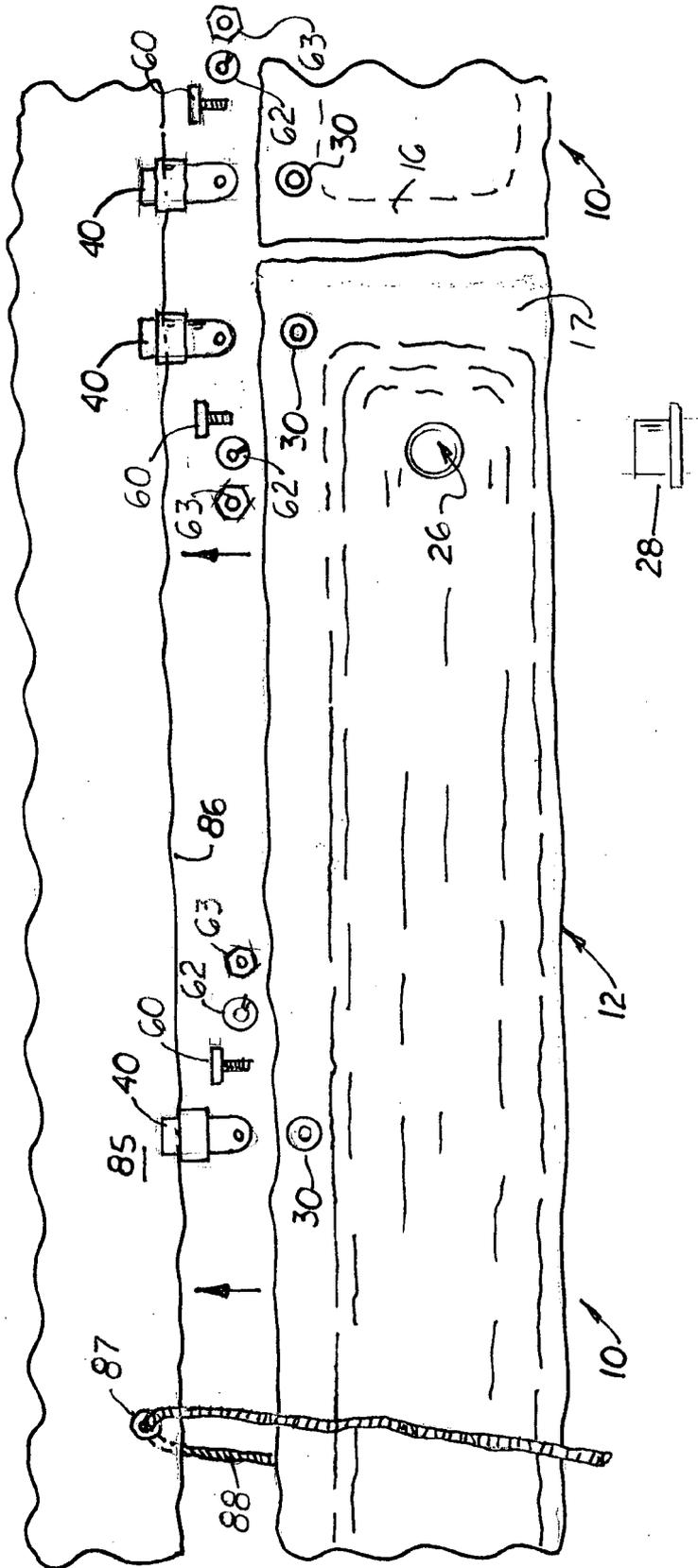


FIG. 3



←FIG. 4B→



←FIG. 4C

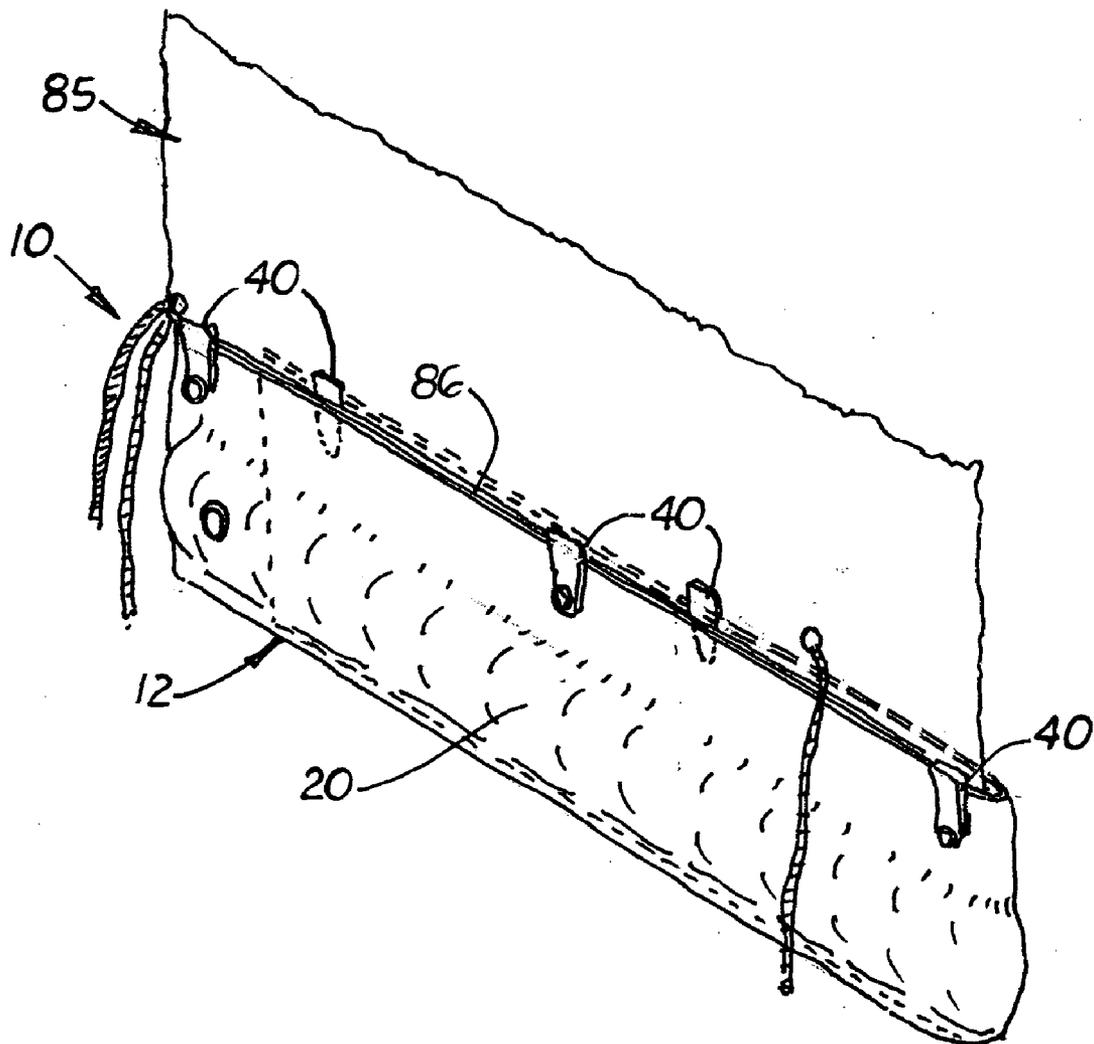


FIG. 5

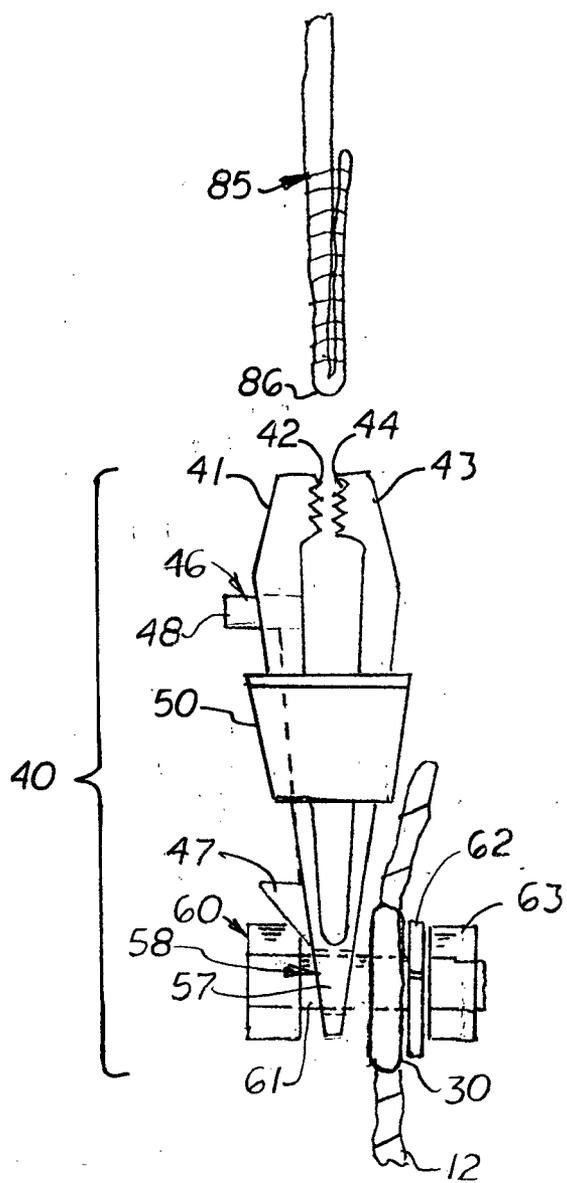


FIG. 6

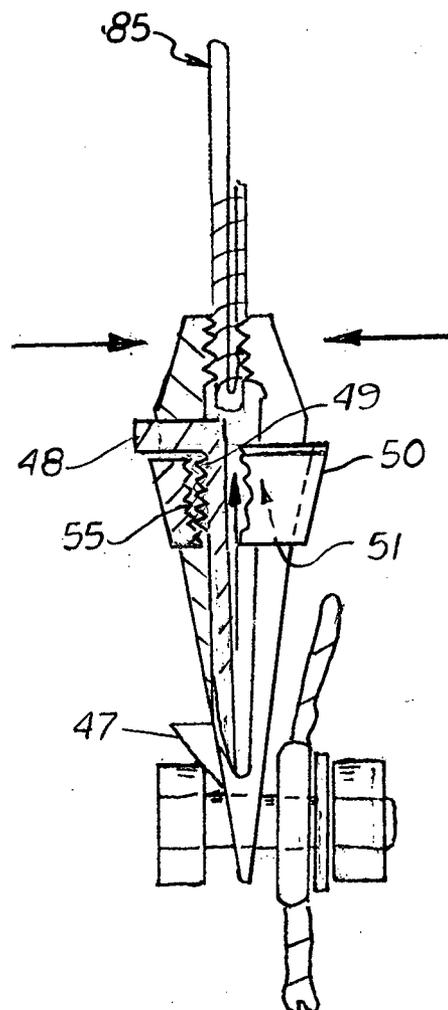


FIG. 7

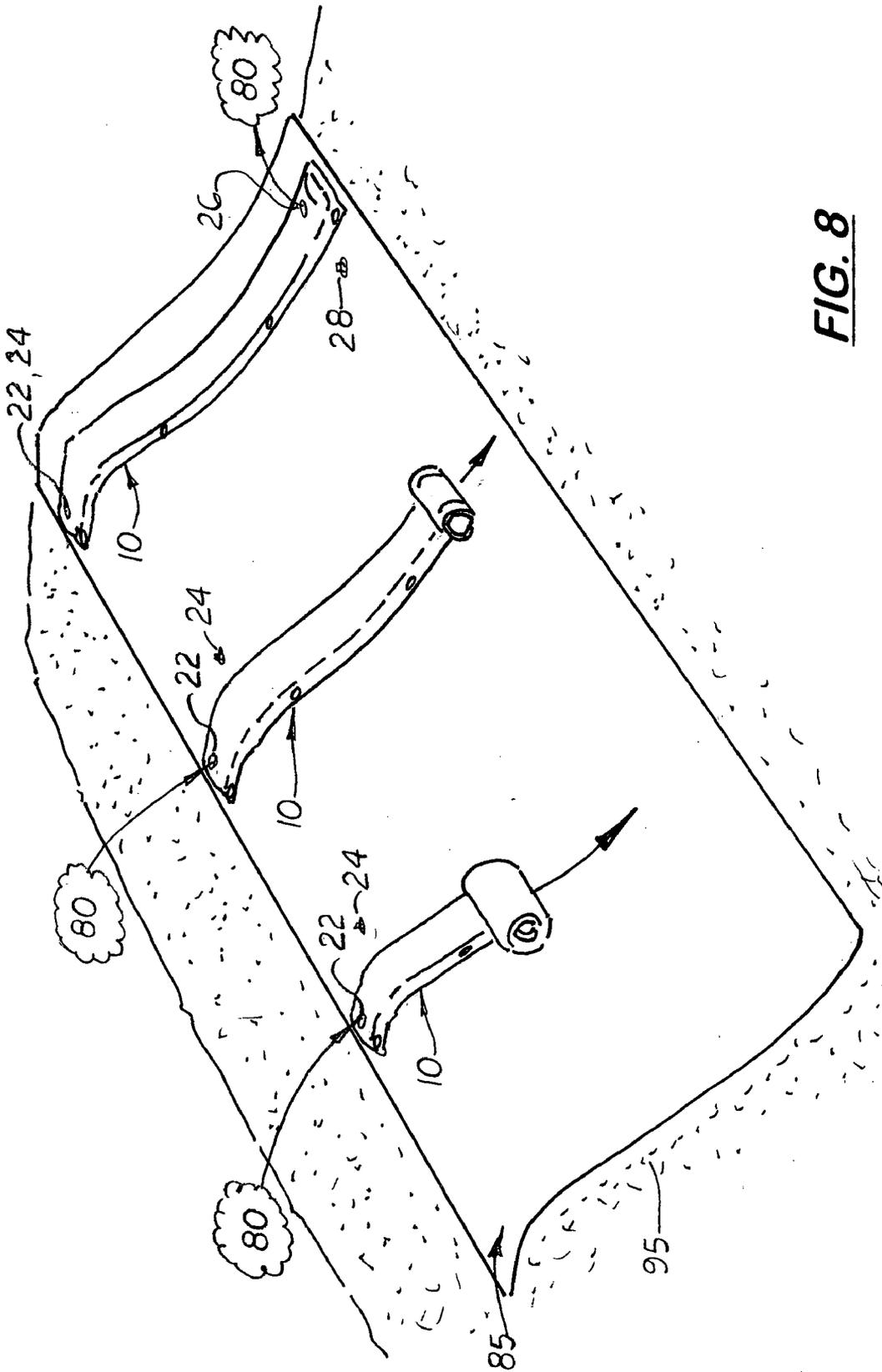


FIG. 8

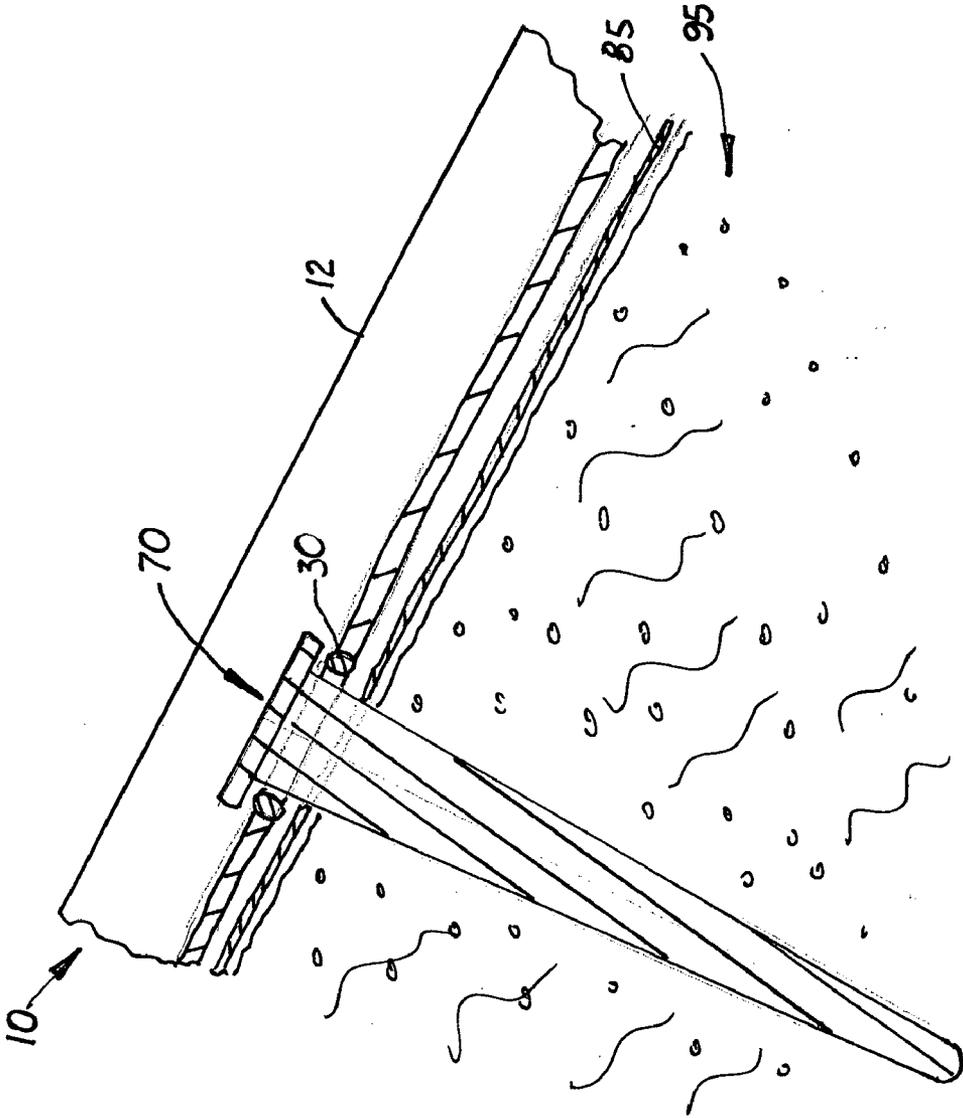


FIG. 9

TARP HOLD DOWN DEVICE

SUMMARY OF THE INVENTION

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention relates to tarp hold down devices, and more particularly, to such devices that are portable, adjustable in length and weight, and can be attached to the lower edge of the tarp when draped over another object or placed on top of the tarp to temporarily hold the tarp over a sloped surface.

[0003] 2. Description of the Related Art

[0004] It is common practice to cover an object stored outdoors with a tarp to protect the object from inclement weather or to hide the object from view. Unfortunately, tarps are manufactured in a few standard sizes and are often too large or too small to adequately cover a particular object. If the tarp is too large, the edges of the tarp are rolled back or folded over on the ground next to the object. Ropes or cords are then wrapped around the tarp and the object to hold the tarp in place. The ends of the ropes or cords must be tied to a stake located on the ground or tied to a lower structure or surface on the object.

[0005] If the tarp is too small, some or all of the edges of the tarp may be elevated off the ground. When this occurs, the portion of the object is exposed and an opening is created under the object and between the object and the tarp that wind, rain or snow may enter. If the tarp includes grommets located at its corners or along its edges, ropes and cords may be tied to the grommets to pull the edges downward and hold the tarp in place over the object. Because the ropes and cords are stronger than the tarp, strong winds may cause the grommets to be torn away from the tarp.

[0006] Most tarps are square or rectangular in shape. Because there are a myriad of different size and shape objects capable of being covered with a tarp, when a standard square or rectangular-shaped tarp is placed over a round or irregular-shaped object, excessive fold lines, pockets, and openings may be created in the tarp. As a result, the tarp may not be aligned over the object so that the grommets are evenly distributed or optimally positioned for connecting to a rope or cord. As a result, additional ropes and cords may be needed to hold the tarp in place over the object

[0007] Recently, wind and water erosion control have become important issues in the construction industry. Many municipalities have promulgated regulations or ordinances that require construction companies to cover excavated dirt with a tarp or cover when placed in a pile for more than 72 hours. While such regulations and ordinance may seem minor, construction companies spend considerable amount of time placing and securing tarps or covers over the piles of back fill material.

[0008] What is needed is a simple device for holding the lower edge of a tarp draped over an object. What is also needed is such a device that can be folded into a compact configuration when not in use and then unfolded and aligned in a parallel position with the lower edge of a tarp. What is also needed is such a device that can be adjusted in length and weight that selectively attaches to the lower edge of the tarp without attaching to the grommets, and can be used to hold down a tarp on a sloped surface.

[0009] The above stated objects and other objects that may become apparent are met by a tarp hold down device disclosed herein that comprises a flexible elongated body capable of being rolled into a compact configuration for storage and then unrolled into an extended configuration when used. The body includes a large bladder designed to be filled with heavy fluid material, such as water or sand. Formed on the bladder is at least one port opening with a removable cap attached thereto that allows the user to selectively fill the bladder with fluid material to create sufficient weight necessary to hold down the edge of the tarp or cover draped over the object or positioned over a sloped surface. When the bladder is filled with fluid material, the body automatically unfurls, straightens and resists bending.

[0010] Formed along at least one edge of the body is a plurality of grommets. When the device is used to hold down the edge of a tarp, a clip is inserted into some or all of the grommets. Each clip extends laterally from the edge of the body and designed to selectively engage the edge of the tarp located adjacent thereto.

[0011] The body is made of flexible, lightweight material, which enables it to be selectively folded into a desirable length. When the body is folded back, it is secured in a folded position by one or more clips. If the bladder is filled with fluid material after being folded over, the fluid material can be retained in one section of the bladder thereby allowing the user to adjust the device's weight.

[0012] When the device is used to temporarily hold down a tarp over a sloped surface, the clips may be replaced with ground piercing stakes that extend through the grommets and the tarp and into the sloped surface.

DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view of a tarp placed over the apex of a building roof with two tarp hold down devices filled with fluid material attached to the tarp's opposite lower edges.

[0014] FIG. 2 is a side elevational view of a trailer with a tarp draped over one end and with one device attached to a section of a lower edge of the tarp.

[0015] FIG. 3 is a top plan view of a pile of hay covered with a tarp with two devices attached to the tarp's opposite lower edges.

[0016] FIGS. 4A-C are side elevational views of the device partially disassembled being aligned with the lower edge of a tarp partially held in place with optional ropes that extend through the tarp's grommets.

[0017] FIG. 5 is a side elevational view showing the device's body being folded rearward and held in a folded position with four clips.

[0018] FIG. 6 is a side elevational view of a clip attached to a grommet in the body with the clamping surfaces spaced apart to receive the adjacent edge of a tarp.

[0019] FIG. 7 is a side elevational view of a clip shown attached to a grommet on the device with the clamping surfaces closed and attached to the edge of a tarp.

[0020] FIG. 8 is a side elevational view of three devices being used to hold a tarp over a sloped surface.

[0021] FIG. 9 is a sectional, side elevational view of a stake being used to hold the device on the sloped surface.

DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

[0022] Referring to the Figs, there is shown a tarp hold down device 10 herein that comprises a flexible elongated body 12 capable of being rolled into a compact roll during storage and then unrolled into an extended configuration for use. The device 10 is designed to be used as a weight and straightedge device for tarps 85 temporarily draped over an object 90 or placed on a sloped surface 95. The device 10 is also designed to be adjustable in length and weight for different projects.

[0023] The body 12 is made of durable, flexible material capable of being used outdoors. In the preferred embodiment the body 12 is rectangular, approximately 72 to 120 inches in length, and 6 to 12 inches in diameter. Formed on the body 12 is a large, longitudinally aligned bladder 20. The bladder 20 is slightly offset from the body's center axis 13 thereby creating a wide seam 14 on one side and a narrow seam 15 on the opposite side. Formed on the opposite ends for the body 12 are two end seams 16, 17. Formed on the bladder 20 is at least one port opening 22 and a removable cap 24 that allows the user to selectively fill the bladder 20 with a suitable fluid material 85 to provide a weight. Formed along the wide seam 14 is a plurality of grommets 30. In the preferred embodiment, the grommets 30 are approximately 1 inch in diameter and formed at the two opposite corners 16, 17 and evenly spaced apart approximately 24 inches along the wide seam 14. The body 12 is made of two, lightweight, flexible vinyl panels 18, 19, adhesively or heat sealed along its edges.

[0024] As shown in FIGS. 1-6, the device 10 is designed to attach to the lower edge 86 of a tarp 85 draped over an object 90. A clip 40 is attached to each grommet 30 that can be selectively attached to the edge 86 of the tarp 85.

[0025] Each clip 40 includes two diverging clamping arms 41, 43 integrally joined together at one end. Formed on the opposite ends of the clamping arms 41, 43 are two parallel clamping surfaces 42, 44, respectively. The clamping arms 41, 43 are biased outward so that the clamping surfaces 42, 44 are sufficiently spaced apart when relaxed to receive the edge 86 of a tarp 85. Located centrally inside one of the clamping arms 41, 43 is a longitudinally aligned tongue opening. Located inside the tongue opening is a tongue 46. One end of the tongue 46 is integrally attached to one adjacent clamping arm 41. The opposite end of the tongue 46 is unattached thereby allowing it to move inward and outward from the tongue opening (not shown). Formed near the attached end of the tongue 46 is an upward extending stop surface 47. Formed on the opposite unattached end of the tongue 46 is an upward extending press tab 48. Located transversely over the top surface of the tongue 46 between the stop surface 47 and press tab 48 is a first set of teeth 49.

[0026] Disposed transversely over the two clamping arms is a sliding collar 50. Formed in the collar 50 is a central passageway 51 designed to slidably receive the two clamping arms 41, 43. Formed on the inside surface of the top

surface of the collar 50 is a second set of teeth 55 that engages the first set of teeth 49 located on the tongue 46 when the collar 50 is pushed forward over the clamping arms 41, 43 as shown in FIG. 7. The width of the central passageway 51 is sufficient so that two clamping arms 41, 43 are forced together to press the two clamping surfaces 42, 44, respectively, against a tarp 85 inserted between the two clamping surfaces 42, 44 when the collar 50 is pushed forward. The first and second set of teeth 49, 55 automatically engage to hold the collar 50 in place over the two clamping arms 41, 43. The press tab 48 is pressed downward to disengage the collar 50 from the tongue 46 thereby allowing the collar 50 to slide backward and release the two clamping surfaces 42, 44.

[0027] As mentioned above, the two ends of the two clamping arms 41, 43 are integrally formed together to form a semi-circular, thin body section 57. Formed transversely in the body section 57 is a bore 58 that receives the threaded shaft 61 of a bolt 60. During assembly, the clip 40 is held so that the bore 58 is aligned and registered with a grommet 30 on the body 12. A bolt 60 is selected and the shaft 61 is then extended through the bore 58. The opposite end of the shaft 61 is extended through the grommet 30 and a large lock washer 62 and nut 63 are attached to the end of the shaft 61 to connect the clip 40 to the body 12. In the preferred embodiment, the nut 63 is loosely tightened on shaft 61 thereby allowing the clip 40 to rotate around the central axis of the grommet 30.

[0028] As shown in FIGS. 7-8, the device 10 may also be used to hold down a tarp 85 on a sloped surface 95. In order to be used for this purpose the above described clips 40 are removed from the body 12. The body 12 is positioned at a desired location over the top edge of the tarp 85 placed on a sloped surface 95

[0029] In the preferred embodiment, a stake 70 is then selected and driven through a grommet 30, the tarp 85, and into the surface 95. The stake 70 includes a spike element 72 with a perpendicular head 74 sufficient in size to press against the outside surface of the grommet 30 as shown in FIG. 8. As mentioned above, the body 12 is designed to be stored in a compact rolled, configuration when not in use. The body 12 is then unrolled and longitudinally aligned on a flat surface. Normally, the fluid material 80 is added to the bladder 20 after the body 12 is longitudinally aligned on the flat surface. When used to hold down a tarp 85 over a sloped surface 95, the fluid material 80 may be added while the body 12 is partially disposed in a rolled configuration thereby allowing the user to align the device 10 over the tarp 85 without physically standing on the tarp 85. In order to do so, the body 12 is aligned so that the port opening 22 is located uphill. When fluid material 80 is added to the port opening 22, it flows downhill and fills the lower area in the bladder 20. As fluid material is added, the body 12 automatically straightens itself over the tarp 85. As shown in FIG. 4 an optional second port opening, designated as 26, may be formed on the end of the bladder 20 opposite the first port opening 22 which allows the user to easily drain the fluid material 80 from the bladder 20 when used on a sloped surface 95. A second cap 28 is provided to close the second port opening 26.

[0030] As shown in FIG. 5, when used to hold down the edge 86 of a tarp 85 draped over an object, the desired length

of the body 12 is first determined. If the length of the tarp 85 is less than the length of the body 12, the end of the body 12 opposite the port opening 22 may be folded rearward over the back surface of the body 12. The number of clips 40 attached to the body 12 and the orientations of the attached clips 40 may be adjusted to adjust the location of the desired downward force exerted by the device on the tarp 85. The cap 24 on the port opening 22 is then removed and fluid material 80 is then added to the bladder 20. Once the bladder 20 is filled, the cap 24 is then re-attached to the port opening 22. The body 12 is then lifted into a position parallel to the lower edge 86 of the tarp 85. The clips 40 are then used to attach the body 12 to the lower edge 86 of the tarp 85. Additional ropes 88 may be attached to the tarp's grommets 87 to tightly wrap the tarp 85 around the object 90. To remove the device 12 from the object 90, the above steps are reversed.

[0031] In the preferred embodiment, the bladder 20 is approximately 6 inches in length and approximately 4 inches shorter in length than the body. The bladder 20 is cylindrical in cross-section and designed to hold approximately 1 gallon of fluid material 80 per 24 inches of length. When water is used as a fluid material 80, the device weights approximately 8 lbs per 24 inches in length which is an optimum amount of tensile force applied to a tarp and an optimal amount of weight for holding a tarp over a sloped surface.

[0032] When the device 12 is used to hold down a tarp 85 on a sloped surface 95, the tarp 85 is first placed over the sloped surface 95. The device 12 is then placed on a desired position over the tarp 85 so that one end is at a high elevation than the other. The stakes 70 are then inserted through the grommets 30 and forced through the tarp 85 and into the surface 95. The cap 24 on the first port opening 22 is then removed and fluid material 90 is then added to the bladder. If the device 10 includes a second port opening 26, the cap 28 is securely attached to the port opening 26 before fluid material 90 is added to the port opening 22. Once the bladder 20 is filled, the cap 24 is then re-attached to the port opening 22. The device 12 can then be used to hold down the tarp 85. To remove the device 12 from the tarp 85, the above steps are reversed.

[0033] In compliance with the statute, the invention described herein has been described in language more or less specific as to structural features. It should be understood, however, that the invention is not limited to the specific features shown, since the means and construction shown is comprised only of the preferred embodiments for putting the invention into effect. The invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the amended claims, appropriately interpreted in accordance with the doctrine of equivalents.

I claim:

1. A tarp hold down device, comprising:
 - a. a flexible elongated body, said body including two parallel upper and lower edges and two parallel side edges, said elongated body being made of material sufficiently flexible to allow said body to be folded over to reduce the overall length of said body;
 - b. a large, longitudinally aligned bladder formed inside said body, said bladder capable of being filled with fluid

material having a sufficient weight to apply weight to with an opening and a removable valve used to fill heavy fluid material or sand;

- c. a port opening formed on said bladder enabling said bladder to be filled with a fluid material;
- d. a closure means attached to said port opening enabling said port opening to be selectively opened or closed;
- e. a plurality of grommets formed along said upper edge or said lower edge;
- f. a means for engaging said grommets and attaching said body to a tarp; and,
- g. a fluid material located inside said bladder.

2. The tarp hold down device as recited in claim 1, wherein said means for engaging said grommets is an adjustable clip.

3. The tarp hold down device as recited in claim 1, wherein said means for engaging said grommets is a stake.

4. The tarp hold down device as recited in claim 1, wherein said fluid material is water.

5. The tarp hold down device as recited in claim 2, wherein said fluid material is sand.

6. The tarp hold down device as recited in claim 1, wherein said fluid material is water.

7. The tarp hold down device as recited in claim 2, wherein said fluid material is sand.

8. The tarp hold down device as recited in claim 1, wherein said bladder is cylindrical in cross-section and has a sufficient diameter to hold approximately 1 gallon of fluid material per 24 inches of length.

9. The tarp hold down device as recited in claim 1, wherein said bladder includes a second port opening formed on said body opposite said first port opening enabling said fluid material to be filled or drained from said bladder.

10. A method for holding down a tarp, comprising the following steps:

- a. unfolding a tarp over an object or surface;
- b. selecting a tarp hold down device comprising a flexible elongated body, said body including two parallel upper and lower edges and two parallel side edges, said elongated body being made of material sufficiently flexible to allow said body to be folded over to reduce the overall length of said body, a large, longitudinally aligned bladder formed inside said body, said bladder capable of being filled with fluid material having a sufficient weight to apply weight, a port opening formed on said bladder enabling said bladder to be filled with a fluid material, a closure means attached to said port opening enabling said port opening to be selectively opened or closed, a plurality of grommets formed on along said upper edge or said lower edge, means for engaging said grommets and attaching said body to a tarp; and, a fluid material located inside said bladder; and,
- c. a using said means for engaging said grommets and attaching said body to a tarp to attach said device to the loose edge of tarp to hold said tarp in place.

* * * * *