

METHOD AND DEVICE TO COLLECT WATER

BACKGROUND AND PROBLEM

The resources of drinking water are strongly restricted in many countries throughout the world. In many countries you have to walk long distances to collect and carry water back home. But also a highly industrialized country as China is suffering from polluted drinking water. Another use is in seas and lakes with salt content or contaminated, in small crafts as rescue vessels life rafts and recreation vessels where you have to bring the drinking water. Rain water is often clean and free of charge.

Inflatable pools can be used to collect rain water, but then you have to pump the water out of the pool as the bottom of the pool is constructed to rest on a planar ground surface. Bathing pools often lack arrangements for anchoring making them easily moved away by the wind when not filled with water. To build a support to raise the pool above the ground level is expensive and time consuming.

THE OBJECT OF THE PRESENT INVENTION AND A WAY TO SOLVE THE PROBLEM

The present invention is working as a mobile rain water collector both for use on land and on water. When not inflated it is easy to deployment by aircrafts or helicopters or by manual move as it have both low weight and volume.

Comprising at least one supporting rack mentioned support walls to carry a funnel shaped membrane with a hose, the one end of which is connected to the outlet of said funnel shaped membrane and the other end of which is being placed outside said support walls and at a level above the ground/water surface allowing the draining to take place by gravity to one or more transport containers. The outlet of the collected rainwater can containing a water treatment filter e.g. activated carbon.

The invention is equipped with attachment eyelets for securing purposes.

DESCRIPTION OF ONE WAY OF A WORKING EXAMPLE

By using a membrane Fig. 3, (2) of a weld able PVC plastic material as a funnel with a centrally positioned drain hole (3) connected to an outlet hose (9) and that the outer edges of said membrane is attached to an inflatable ring shaped wall Fig. 1, (1) so that the outlet (4) of the drain hose is situated on such a height over the ground/water surface that a draining by gravity can take place to a suitable container/can (not shown in the drawing) as the membrane will collect rain or condense water. The height of the support wall shall also be compensated to assure a floating on a water surface.

To stop wind and waves from moving the equipment it is preferably equipped with anchoring and fastening means (8) made from welded plastic tabs having reinforced hole eyelets (6) or staples. At these eyelets or staples ropes are attached and secured by tent pegs (not shown on the drawing) or to a boat or a bridge, or to a bottom anchoring means.

When the air in the supporting walls is deflated through the air valves (7) and the equipment being folded it is easy to move having a size and a weight as a tent for several persons and being stored in a transparent bag.

DESCRIPTION OF THE DRAWINGS

The invention will be more closely described below in connection to the enclosed drawings showing one embodiment. Thus the invention is not restricted to just this shown embodiment but other examples can be made within the scope of the present invention.

Fig. 1 is a 3-D view of equipment

Fig. 2 is a plan view from above, and

Fig. 3 is a transparent side view

LIST OF THE USED PARENTETIC REFERENCES

- 1, inflatable supporting wall
- 2, funnel membrane
- 3, outlet hole
- 4, draining hose
- 5, anchoring tab
- 6, eyelet
- 7, air valve
- 8, anchoring attachment
- 9, hose connection

CLAIMS

1. A device for collecting rainwater as a drinking water, ***characterized in*** that said device comprises a mobile rainwater collecting membrane (2) increased to a level of at least one inflatable support wall (1), wherein
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said at least one inflatable support wall (1) is arranged to allow the device to float on water,

said device is arranged to allow gravimetric drain of the rain water to occur
10 through a substantially centrally positioned drain hole (3) of the membrane (2) and through an outlet hose (9), the one end of said outlet hose (9) is connected to an outlet of the substantially centrally positioned drain hole (3) of the membrane (2) at an underside of said membrane (2) and inside of said at least one inflatable support wall (1);
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the other end of said outlet hose (9) is arranged outside of said at least one inflatable support wall (1);

an outlet (4) of said outlet hose (9) is arranged to be provided with an activated
20 carbon water treatment filter to allow said gravimetric drain of the rain water from said device to a collection vessel without the device supporting substrate being able to contaminate the collected rainwater;

said outlet (4) is arranged outside of said at least one inflatable support wall (1).
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2. Device according to claim 1, wherein inflation of the at least one support wall takes place via at least one gas cartridge to at least one air valve (7).

3. Device according to claim 2, wherein a valve automatically opens gas cartridge
30 pressure to inflate the at least one support wall, in contact with water, like in life-rafts.

4. Device according to claim 1, wherein the attachment eyelets (6) are fitted for
35 anchoring the device.

5. Device according to claim 1, wherein a holding rope or handles is/are located in top of the support wall.

6. Device according to claim 5, wherein the supporting wall buoyancy in water is so dimensioned that people can stay afloat by holding onto said holding rope or handles.

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7. Method for collecting rain water in a device according to any one of claims 1 – 6, **characterized in** that a mobile rainwater collecting membrane (2) is increased to a level of at least one inflatable support wall (1),
said inflatable support wall (1) allows the device to float on water;
said device allowing gravimetric drain of the rain water to occur through a
substantially centrally positioned drain hole (3) of the membrane (2) and through
an outlet hose (9) connected at one of its ends to the membrane at an underside
of said membrane and arranged inside of said at least one inflatable support wall
(1) and the other end of said outlet hose (9) forming an outlet (4), said outlet (4)
is arranged on an outside of said at least one inflatable support wall (1), said
outlet (4) allowing drain of the collected rain water to a collection vessel without
the device supporting substrate being able to contaminate the collected
rainwater.

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