

container 15 (8) is directed to fall drop by drop into an overflow container 17 arranged in a lower part of the housing 2. Although it is not shown, it is better to hang a thread from an outside notched portion of the eighth sampling container 15 (8) or mount a thread-like member made of paper, plastic or the like there in order to allow the rain to smoothly fall drop by drop.

Furthermore, in both preferred embodiments shown in FIGS. 1, 8, it is important to fix the position of the outlet port 7 of the funnel 5. It is preferable to stick double-sided tape or the like are stuck to for example, between the funnel hole 6 and the funnel 5 in the ceiling portion 3 of the housing 2 to fix the position of the outlet port 7 of the funnel 5.

As above described, with the first stage rainfall sampler according to the present invention, a variable balanced condition is formed between the rainfall sampled by the sampling containers detachably mounted on the tumbler and the weight mounted on the tumbler, so that the rainfall can be automatically sampled step by step without requiring a motive power and the sampling containers can be easily washed. In addition, the sampler is simple in construction, so that it can be inexpensively produced.

The present invention is not limited by a tumbler detachably hanging the sampling containers as disclosed in the preferred embodiments. The tumbler may be formed of a support member radially extending from a support shaft or a circular member may be supported by a support shaft through a rib.

In addition, the detachable supporting construction of the sampling containers is not limited by the preferred embodiments. A circular receiving member may be partially notched.

What is claimed is:

1. A rainfall sampler comprising:
 - a housing member including means for receiving rainfall and permitting it to flow by gravity through an outlet port;
 - a support member vertically mounted adjacent the receiving means for receiving the rainfall, the support member being rotatably mounted to allow rotation in a vertical plane about a central pivot point and including a plurality of separate containers that are sequentially positioned beneath the outlet port by rotation in a vertical plane; and
 - a weight member attached to the support member to balance the weight of rainfall that is held in a container so that the individual containers will progressively rotate in a vertical plane moved solely by a difference in weight between the weight member and the container as they are filled from the outlet port, the weight member providing a varying torque force to the support member relative to its movement with the support member around the central pivot point.
2. The invention of claim 1 wherein each container is pivotally mounted to the support member.
3. The invention of claim 1, further including a stop member positioned adjacent the support member for providing a limit to the rotation of the support member.
4. The invention of claim 1 wherein one container has an overflow port.
5. The invention of claim 1 wherein the support member includes a series of pivoting receiving members for respectively providing a removable support for each container.

6. The invention of claim 3 wherein the weight member projects outward from a side surface of the support member to contact the stop member at the beginning and end of rotational movement.

7. The invention of claim 5 wherein each container has a pair of arcuate edges.

8. The invention of claim 1, further including a pivotally-mounted cover that is balanced to cover the receiving means and is activated by rainfall to open the receiving means.

9. A rainfall sampler capable of sequentially storing predetermined quantities of rainfall in separate containers by mechanical operation, comprising:

- a housing member having an opening to receive rainfall and to direct it to an output port within the housing member;

- mechanical means for covering the housing member opening with a cover member and removing the cover member when rainfall occurs, including a pivotally-mounted cover member that is biased to an open position and a restraining member that holds the cover member in a closed position over the housing member opening, the restraining member releasing the cover member in the presence of rainfall, wherein the restraining member is a paper member which loses its strength when sufficiently wetted; and

- means in the housing member for allowing a support member and attached separate containers to revolve ferris wheel-like in a vertical plane for respectively and sequentially storing a predetermined weight of rainfall in separate containers.

10. The invention of claim 9 wherein the mechanical means includes a pivotally-mounted cover member that is biased to an open position and a restraining member that holds the cover member in a closed position over the housing member opening, the restraining member releasing the cover member in the presence of rainfall.

11. The invention of claim 9 wherein the paper member is a segment of toilet paper-like material that is tautly secured to hold the cover member in a closed position when dry.

12. The invention of claim 9 further including a removable weight member which balances the support member to permit rotation after receiving a predetermined weight of rainfall.

13. The invention of claim 11 wherein the cover member includes a cantilevered arm with a weight member to bias the cover member to an open position.

14. A rainfalls sampler comprising:

- a housing member including a funnel means for receiving rainfall and permitting it to flow by gravity through an outlet port;

- a ferris wheel-like support member rotatably mounted adjacent the funnel means for receiving the rainfall, including a plurality of removable separate containers that are pivotally mounted on the support member and are sequentially positioned beneath the outlet port by rotation of the support member in a vertical plane about a pivot point; and

- a weight member directly attached to the support member to balance the weight of rainfall that is held in a container so that the individual containers will progressively rotate due to a difference in weight between the containers and the weight member as the containers are filled from the outlet port as the weight member rotates from one side of