

- [54] **ACTIVE CLOUDWATER COLLECTOR**
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- [58] **Field of Search** ..... **73/863.21, 863.22, 863.23, 73/863.24, 863.25, 863.02, 863.03, 863.31, 864.34, 864.35, 170 R; 55/185, 257 PV, 259, 528**

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[57] **ABSTRACT**

A cloud water collector is disclosed comprised of a sampler duct having a plurality of spaced Teflon strands, in the form of screens, mounted across the conduit at an acute angle facing the open inlet of the conduit. Droplets in a cloud sample are drawn into the conduit by a fan located at the back end of the conduit, impact upon the Teflon strands and are drawn down to the lower ends of the strands, where they drop and the accumulated droplets are diverted to a sample bottle for collection. The cloud water collector can be automated to collect a plurality of successive cloud water samples by an automated sampler containing a reservoir into which cloud water obtained in the cloud water collector is discharged. A motor-driven turntable is provided which holds a plurality of sample bottles. When the reservoir is filled to a predetermined volume, apparatus, such as a liquid level sensor, actuates a valve to open same and discharge the liquid sample from the reservoir into one of the bottles at a filling station on the turntable. The valve then closes and the turntable rotates to index the next bottle beneath the reservoir at the filling station, and the operation is repeated to fill the latter bottle. When all of the bottles on the turntable have been filled, the indexing mechanism is deactivated and liquid accumulating in the reservoir is diverted to an overflow bottle.

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**25 Claims, 17 Drawing Figures**

