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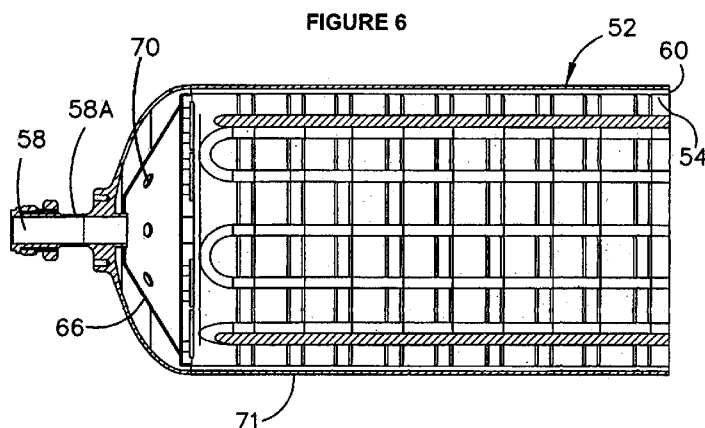
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(54) Title: HYDROGEN STORAGE UNIT



(57) Abstract: A hydrogen vessel comprising a fluid communication port, an outer vessel and an inner compartment. The inner vessel contains a hydrogen storage material, such as a metal hydride. In one embodiment the inner vessel is mechanically isolated from the outer vessel. The separation between the outer and inner vessel provides a peripheral volume between each vessel. The peripheral volume about the inner compartment may be fluidly isolated from the inner compartment. The hydrogen storage unit further includes a fluid pressure device in communication with the peripheral volume; and a controller for controlling the fluid pressure device during desorption and absorption.