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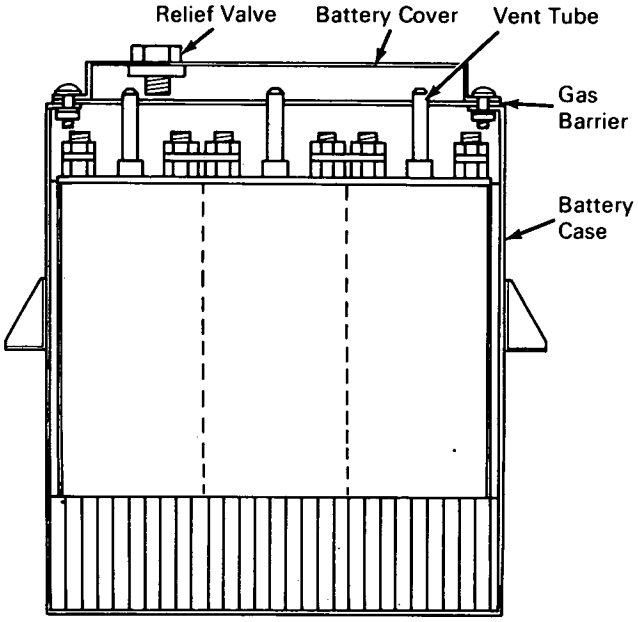
An Explosion-Proof Battery Case



During normal operation, silver-zinc batteries generate hydrogen and oxygen gases, which can cause an explosion if a spark occurs within the battery. The innovation shown in the illustration is a design which separates the explosive mixture from all potential spark sources.

The battery case is equipped with a relief valve, a connector, and two covers. The gas-barrier cover is made of polyethylene and the battery cover is stainless steel. The bottom ends of three vent tubes (thin-walled nylon tubing) are cemented into the cell vents, forming a gas tight seal. The upper ends fit through the gas barrier, so that any gases generated in the cells are forced to vent into the cover compartment. This arrangement isolates the gases from the electric power and hence from the source of any possible spark.

Note:

Requests for further information may be directed to:
Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: TSP70-10304

Patent status:

No patent action is contemplated by NASA.

Source: W. H. Keathley of
Manned Spacecraft Center
(MSC-12335)

Category 01