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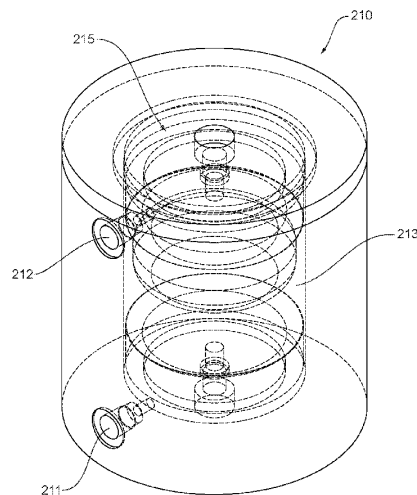


Fig. 3

(57) Abstract: This disclosure relates to a method for detecting and quantifying elemental mercury vapour in one or more solid sample. The method being particularly suitable for detecting and quantifying elemental mercury vapour in solid samples obtained from a petroleum reservoir by subjecting the solid samples to conditions that cause the release of one or more volatile compound therefrom including elemental mercury vapour, using a carrier gas to transport the released one or more volatile compound into a first trap to capture one or more volatile compound other than the elemental mercury vapour, and finally into an additional trap downstream of the first trap to capture the elemental mercury vapour for analysis and quantification.

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