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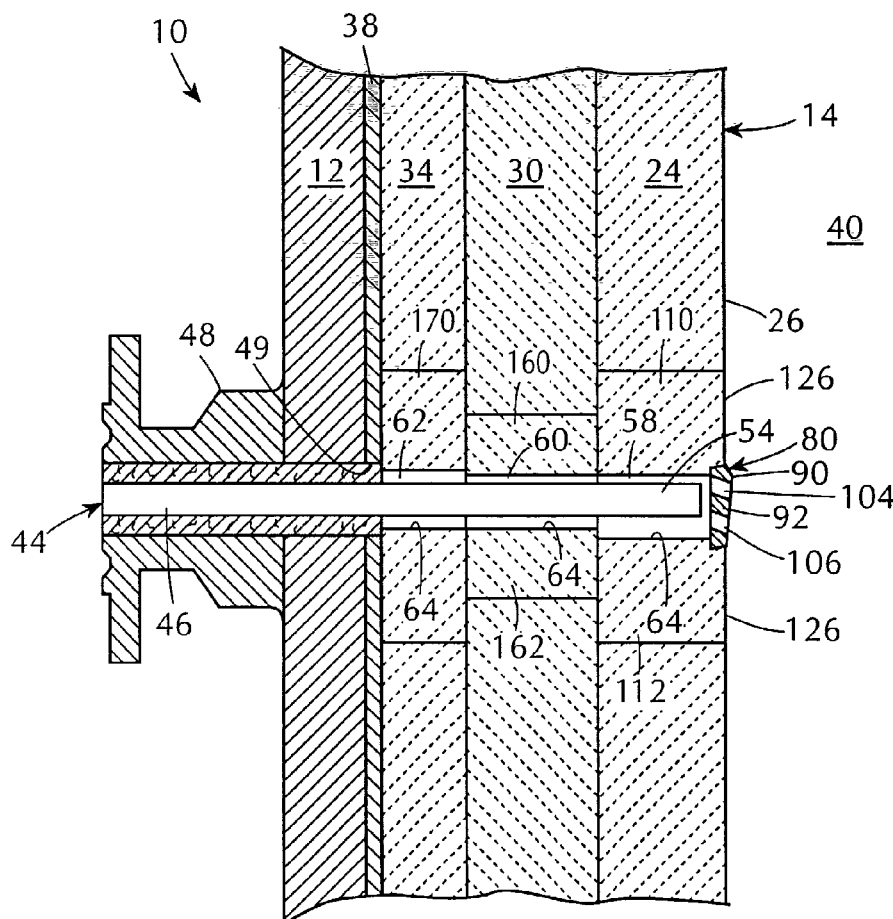
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[Continued on next page]

(54) Title: PROTECTIVE CAP FOR A THERMOCOUPLE IN A GASIFIER



(57) Abstract: The protective cap (80) for a thermocouple (44) in a gasifier (10) is installed at an opening of a thermocouple cavity in a hot-face lining of the reaction chamber of the gasifier. The cap is a generally disc-shaped structure that, in one embodiment, includes an upper slag deflecting surface over the receding surface to bypass the receding surface. A counterbore is formed in the refractory lining to accommodate the protective cap and to enable the protective cap to be recessed in the refractory lining. Holes can be formed in the cap with an upward incline to minimize the possibility of downwardly moving slag flowing through the holes into the thermocouple cavity (50). The holes can be made small enough to minimize the risk of allowing excessive radiant heat from reaching the gasifier vessel or shell (12). A peripheral edge of the cap has upper and lower portions that slope downwardly to help maintain the cap in its position in the counterbore.

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