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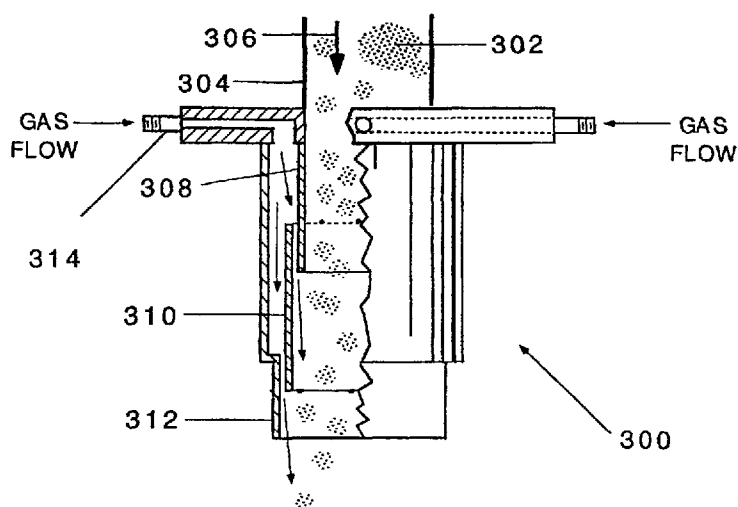
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(54) Title: CIRCUMFERENTIAL AIR KNIFE AND APPLICATIONS



(57) **Abstract:** A novel, circumferential air knife is provided which injects a gas stream along the inside walls of the air knife. The air knife can be advantageously placed at or near the entrance to a suspension vessel to reduce buildup of solid materials transported to the suspension vessel. The gas stream is injected at a rate sufficient to reduce the buildup of solid materials on the walls of the air knife (and thus at the entrance to the suspension vessel). The air circumferential air knife is particularly useful in a TiCl₄ production process for reducing buildup of hygroscopic cyclone dust at the entrance to a suspension vessel.

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