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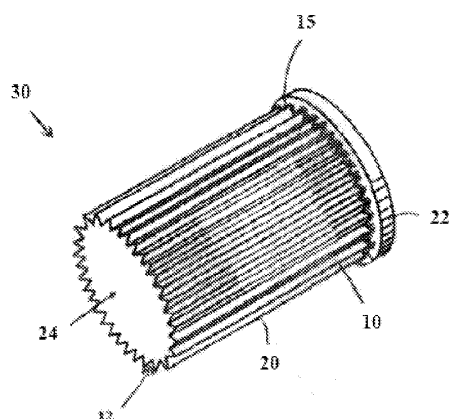


Figure 1

(57) Abstract: This disclosure provides certain strong cation-modified ion exchange resins and membranes useful for carrying out the removal of metal and metal ion contaminants in fluid compositions. Filtered liquid compositions with significantly reduced amounts of metals can be used in a microelectronic manufacturing process, such as liquids for removing photoresist. The cation-modified ion exchange resins and membranes of the disclosure can be configured for use in a microelectronic manufacturing system, which can be utilized in the system as a point of use metal-removal feature for liquids entering the system. Advantageously, the filter materials and methods of this disclosure showed considerable improvement in preventing degradation and the formation of color bodies and dimeric and oligomeric materials from ketones (*e.g.*, cyclohexanone) in the liquid compositions while not compromising the filter material's ability to remove undesired metal ions.



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