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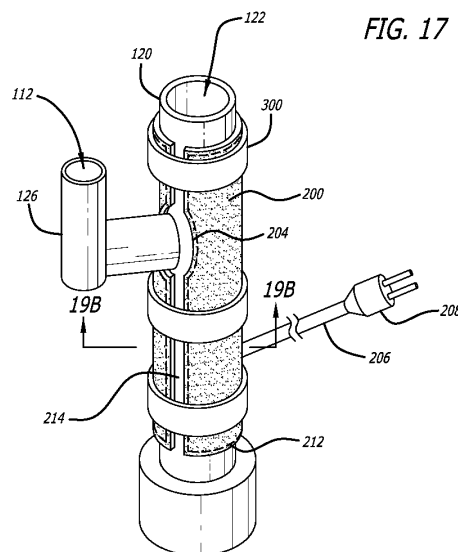
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(54) Title: LOW PROFILE HEATER APPARATUS AND METHOD OF MANUFACTURE



(57) Abstract: A novel low profile heater apparatus and method of manufacture is disclosed, which provides a lower assembly including a first sheet, a heating sheet including at least one heating element, a dielectric sheet, an intermediate sheet and one or more electrical leads configured to supply electrical power to the heating element, the electrical leads extending through a lead sleeve of an upper assembly. The upper assembly includes a top sheet with one or more split sleeves securely attached thereto, thereby forming one or more strain relief assemblies configured to prevent damage to the electrical leads. One or more stitches or coupling features securely attach the upper assembly to the lower assembly. One or more retention device are be used to securely retain the low profile heater apparatus to one or more pipes, tubes or conduits of a plumbing apparatus.

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