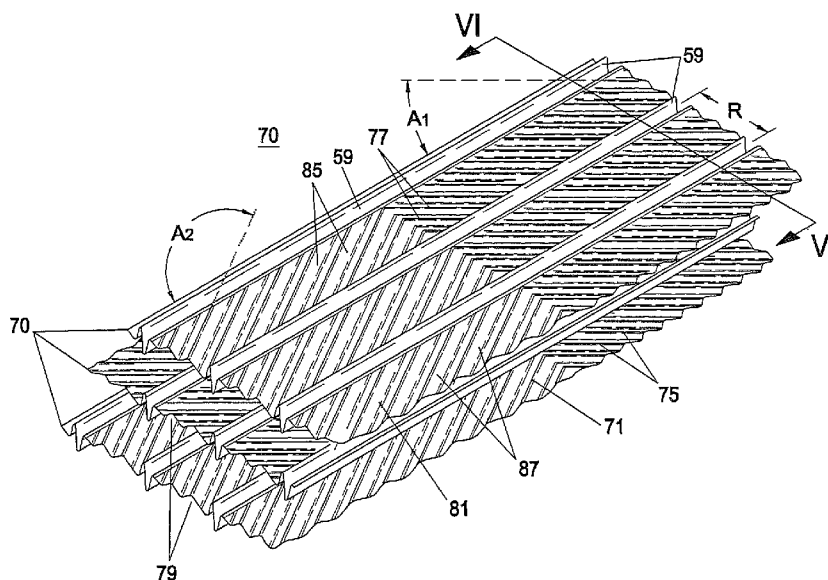




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(54) **Title:** HEATING ELEMENT UNDULATION PATTERNS**FIG. 5**

(57) **Abstract:** Heat transfer sheets (70) for a rotary regenerative heat exchanger (10) have a alternating first and second undulation surfaces (71,81). The first and second undulation surfaces (71,81) are composed of parallel ridges (75,85) angled in alternating directions. When the heat transfer sheets (70) are stacked, they create passageways (79) between them that direct air/gas through them. The ridges (75,85) redirect the air flow near the surface of the heat transfer sheet (70) imparting turbulence reducing laminar flow to improve heat transfer. The heat transfer sheets (80) employ curved ridges (95) having valleys (97) between them that define passageways (99) that constantly redirect the air/gas flow minimizing turbulence, creating efficient heat transfer.



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