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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) **Title:** MULTI-VANE THROTTLE VALVE

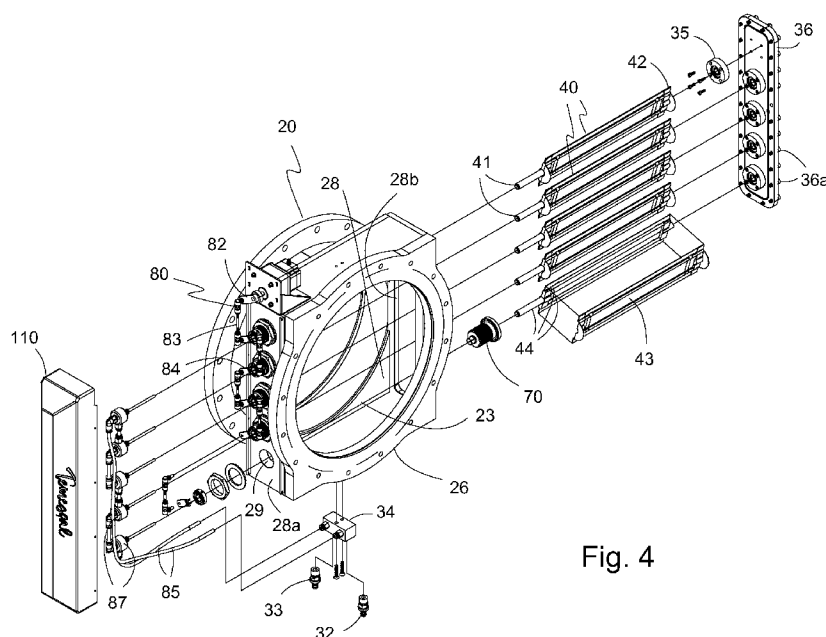


Fig. 4

(57) **Abstract:** A multi-vane throttling valve for a vacuum process chamber includes a throttle chamber body having an inside exposed to the vacuum process chamber and an outside exposed to atmospheric pressure, the chamber body defining a through-opening for controlling vacuum within the vacuum process chamber, a plurality of rotatable vanes mounted within the through-opening for controlling a flow of gases through the through-opening where each rotatable vane includes a cooling flow pathway in fluid communication with and disposed longitudinally along each rotatable vane, and a drive mechanism disposed on and connected to an outside of the throttle chamber body for rotating the plurality of rotatable vanes to vary the flow of process gases.



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