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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

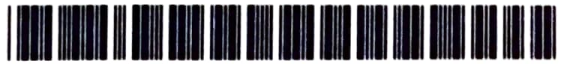
Therefore, this

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Lea Storch Res

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(54) **PIVOTING, HINGED ARC VANE ROTARY COMPRESSOR OR EXPANDER**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 207 days.

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(58) **Field of Classification Search**
USPC **418/5, 12, 151, 84–86, 236–238, 243, 418/248–250, 259, 270**
See application file for complete search history.

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(57) **ABSTRACT**

A rotary compressor or expander include a cylindrical housing chamber, a rotatable cylindrical rotor mounted eccentrically with respect to housing chamber center, a cylindrical rotor liner free to move around the rotor, and a pivoting generally circular arc vane hinged to the rotor liner. Cavity or buckets engraved with the outer surface of the rotor liner together with corresponding inlet nozzle flow provide additional momentum impulse transfer from working fluid to expander eccentric rotor. The inlet of the rotary expander is equipped with a rotating valve synchronous to the eccentric rotor, regulating the admission time and duration of the entering working fluid. The exhaust of the rotary compressor is equipped with either a check valve or a rotating valve synchronizing the fluid discharge time and duration.

6 Claims, 12 Drawing Sheets

