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- 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))
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(54) Title: ELECTRICALLY COUPLED COUNTER-ROTATION FOR GAS TURBINE COMPRESSORS

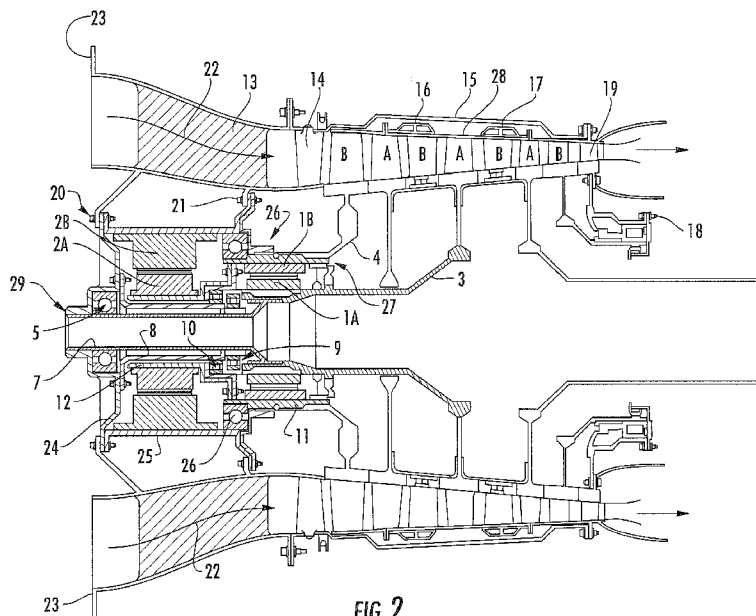


FIG. 2

(57) Abstract: A system and method for implementing stage-by-stage counter rotation in a multi-stage axial compressor of a gas turbine engine. The system includes an electrical power generator and an electric motor (2). A turbine-driven shaft (3) connected to an armature (1A) of the electrical generator drives a first plurality of compressor blades (A). The electrical generator armature (1A) induces changing magnetic flux in the stator coils (1B) of the electrical generator which generates electrical power that is sent to a power control module (PCM). The power control module (PCM) controls the electrical motor (2) and excites the coils in the electric motor stator (2B) which drives the electric motor armature (2A). The electric motor armature (2A) drives a second shaft (4) which drives a second plurality of compressor blades (B) in an opposite direction to the first plurality of compressor blades (A).

