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- [54] **FIBER-OPTIC ROTARY JOINT WITH BUNDLE COLLIMATOR ASSEMBLIES**
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- [73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.
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- [58] Field of Search 385/25, 26, 20, 21, 385/33, 35, 36

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[57] **ABSTRACT**
 There is presented a fiber-optic rotary joint with first and second bundle collimator assemblies, the joint comprising a generally cup-shaped main rotor, a first bundle collimator assembly fixed in a central opening in a bottom wall of the main rotor, a generally cup-shaped stator disposed within the main rotor, the stator having a bottom wall opposed to the main rotor bottom wall, and a second bundle collimator assembly disposed in a central opening in the bottom wall of the stator. The joint further includes a prism mounted in a prism rotor in the joint between the first and second collimator assemblies, and gear means for causing rotation of the main rotor at twice the speed of rotation of the prism rotor. Azimuthal adjustment structure is disposed on one of the first and second collimator assemblies for azimuthal alignment of the one collimator assembly with the other of the collimator assemblies.

- [56] **References Cited**
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4 Claims, 3 Drawing Sheets

